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THE WORLD'S ESSENTIAL KNOWLEDGE

FIVE VOLUMES

HENRY COOK HATHAWAY, A.B.

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VOLUME I—OUTLINE OF HISTORY

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VOLUME III—OUTLINE OF PHILOSOPHY

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OUTLINE OF PHILOSOPHY

PART I

THE
WORLD'S ESSENTIAL KNOWLEDGE
VOLUME III

OUTLINE OF PHILOSOPHY
PART I

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OUTLINE OF PHILOSOPHY

PART I

OUTLINE OF PHILOSOPHY

PART I

INTRODUCTION

THE term, "Philosophy," has its place in popular speech as well as in a college curriculum. In a general way, philosophy indicates a mood enjoyed by a well-balanced mind. It suggests a calm and courageous outlook upon the world on the part of one who has learned to view life broadly and enjoy the consolation which comes from such steady vision. A person is spoken of as being "philosophical" when he is in the habit of accepting the course of human events in an untroubled manner. Such a person takes things "philosophically" when he is contented amidst the vicissitudes and painful experiences of life—disease and disaster, sorrow and misfortune, and even death itself. Now, this philosophical attitude of the popular mind, while it reveals a mood rather than a method, does not fail to contain the essential principle of all philosophic speculation. We are all philosophers naturally in a way that we are not all scientists.

The ideas which are involved in the philosophical mood, whereby the reflective person

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substitutes thought for feeling, are those of Universality and Necessity. The misfortune which has happened to one person is likely to beset all, and that which seems to have occurred by chance is seen to have come about in accordance with necessary principles. That is what the popular mind feels when it philosophizes; that is what philosophy itself works out according to the laws of logic. But the popular mind moves slowly and painfully toward the conclusions which the philosophical mind is able to draw at once. Yet both agree in setting up as the standard of judgment the idea of universality. It was in this spirit that Goethe, who stood midway between the two types of mind, affirmed: "Death must be a benefit, because it is universal."

In its most definite form, then, philosophy is the art of living and thinking, feeling and willing by means of universals. Our natural tendency is to proceed according to immediate impression, personal prejudice or political bias. Hence we introduce our statement of an issue with the personal preliminary—"The way I look at the question," or "From my point of view." We are far less likely to say, "According to the principles of sound reasoning," or "From the standpoint of pure logic." And yet if we took none but the philosophical point of view, life would come to a standstill and we should soon

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be petrified, since the force of life and the work of the world proceed from narrow and intensified views rather than from philosophical generalizations. Philosophy cannot expect or even desire to eliminate these personal and prejudicial views from the minds of men; but it can emphasize such universality as they contain and thus round them out. Then it may change the good man into a moralist and, perhaps, make a politician over into a statesman.

When philosophy withdraws from the world, as it has always done, it elaborates these universal principles for their own sake. Mere thought becomes Rationalism; the sense of happiness deepens into Optimism; and religious feeling solidifies into Theism. Philosophy at its best, or worst, is the tendency to let thought drive out all personal feelings and all particular impressions so that the philosophical thinker may find his true home in a system of universals, or World of Ideas.

Every-day Experience

But still the art of thinking by means of universals, which may seem like lines of latitude in the frigid zones, is more or less akin to the usual workings of the human mind. Molière's M. Jourdain was surprised to learn that he had spoken prose all his life without knowing it. The average person may be gratified to learn

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that all his life he has philosophized unconsciously. For, universals of a certain sort appear everywhere and arch over every-day experience as the firmament over the little earth. When one senses something blue, he really has a perception of "blueness" to which the particular shade of blue belongs. Indeed, the act of apprehending the particular color blue involves the act of perceiving color generally. In this perception of color there is also the higher idea of quality, and when one has reached that idea he has gone about as far as the mind can proceed along that line. Thus, simple sensation on the part of the human mind is akin to the act of dropping a stone into the water; the ever-widening circles indicate the universal range of reason. Apparently, we are so constituted that we cannot enjoy sensation without thought or see the small without the large, or grasp the particular apart from the universal.

In the act of perceiving individual objects, the same smooth passage from the particular to the universal is a matter of common experience. When one recognizes a man with whom he is acquainted, his mind grasps the idea of both the individual man and mankind. To notice an elm is to become aware of tree life; to look at some familiar animal, as a horse or cow, is to entertain the idea of animality in distinction from other forms of life; and to pick up a stone

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is to enter into relations with matter as such. The rustic who for the first time saw a giraffe and who said, "There ain't no such animal," was decidedly logical. For we hardly perceive a particular thing without considering the class to which it belongs, as specimen to species.

In addition to such universalizing tendencies as are found in sensation and perception, philosophy observes the more refined and inclusive forms of Space and Time. Out of these proceed the mathematical conceptions peculiar to science, but they are none the less modes of every-day experience. All objects are found to exist in the form of space; all events take place according to the form of time; so that the temporal and spatial are the most universal ways in which the world appears, the most comprehensive forms of which the mind is capable. And yet these mighty, almost omnipotent, ways of grasping reality lie at our door, or may be had for the asking. They are part and parcel of nature just as they are native to the mind which would interpret the natural order of things and events. To know "the flower in the crannied wall" may or may not be to know the secret of all nature, but to know one single solid, however small, is to grasp all perceptible reality, and to realize the depth of one instant is to fathom the secret of all time. Philosophy may desire to refine the natural universals of color and tone, just as it may strive to

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analyze the ultimate meaning of space and time, but it cannot proceed to these larger, finer universals until it has accepted the natural, simple universals open to all minds in their common operations.

But there comes a time when philosophy, which shares its universals with plain thinking, must break with common sense and go its own superior way. This break occurs when philosophy turns away from the pictorial world of percepts and attempts to discover the World of Ideas. The broad earth, with its deep seas and lofty mountains; the spacious skies, with their mythical constellations and vast galaxies, are dismissed from the philosophical mind which aspires to find the true situation in an impalpable, imperceptible world of intellectual forms. It is this unearthliness which is the most characteristic feature of speculative philosophy; it is this transcendentalism which has given the impression that philosophy is an isolated form of study and philosophers in a class by themselves. This amounts to saying that there is something peculiar about philosophy, altho the mere recognition of strangeness does not inform us as to wherein this exceptional state of affairs is to be found.

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The Man Without a Country

The peculiarity of philosophy, however, is this—that it has no field of its own, so that it must carry on its operations by what seems to be a system of trespassing. When one takes up the study of physics, one has before him the world of matter and motion. If chemistry be his vocation, he finds the world of atoms ready for his investigations. On the psychological side of science, there is something like a science of mind, as also a field for him who will survey the expression of mind in history. Art and religion appear to be elusive things, but the study of them is realizable on the basis of concrete beauty in the arts and positive religion in the history of human worship. It is only when one takes up philosophical study that one looks about in vain for appropriate and definite subject-matter. It might seem as tho the same were the case with mathematics, since the mathematician, having merely glanced at the world of space, proceeds to build up geometrical systems without regard to what actually exists in the spatial order of things. The mathematician, however, follows the analogy of reality in ways unknown to the speculative philosopher.

But, if the philosopher has no special field which might be called the philosophical one, in comparison with the physical, chemical and

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mathematical, there is a sense in which all the fields are his. This, of course, suggests a mental loftiness or superiority complex, which, however, is not natural with the philosophical mind in its well-known humility. The philosophical mind deals critically with the material which the special sciences examine only up to the point which interests them or seems pertinent to their operations. What orthodox physicist is there who would attempt to tell what he meant by matter? Or what geometer would look away from the special forms of space which he is studying to tell us something about the ultimate nature of the space with which he is dealing? The psychologist is just as uncommunicative about mind, except as he casts doubts upon its existence.

The philosopher, however, is not satisfied with the special truths which he finds in the special sciences, but would find out what they really amount to. In this sense, the philosopher is analogous to an auditor, who is ignorant of the art of making money, but who can set aright the accounts of those who specialize in money-making. Or, the philosopher is akin to an attorney who cannot himself engage successfully in a practical enterprise, as of business, industry or finance, but who can advise his client whether his activities are in accordance with the law. The auditor, or accountant, knows how to familiarize himself with the essentials of a corporation as

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far as the sinews of business are concerned, just as the lawyer with his flexibility of mind can easily come abreast of the idea involved in a title, merger or real estate scheme without having the practical knowledge which these things in particular involve. In like manner, the philosopher can observe the bearing of a system of physics, a school of psychology, or a new geometry, and set it aright in the eyes of reason.

The Philosopher Is Extinct

In reviewing the fields of others, as the physicist, chemist or geometer, because he has no field of his own, the philosopher is further embarrassed by the fact that he cannot point to any definite results achieved. In the field of the special sciences, it is quite appropriate to say, "Science has shown that all matter is controlled by the law of gravitation," even when we are not as sure of our gravitation as we used to be; it can assert that all matter is of atomic construction, even when the status of the atom is dubious. But the speculative mind would hardly say, "Philosophy has shown that whatever is, is," or, "The middle term must be distributed at least once." No; for it is the fate of the philosopher to conduct his speculations in the region of glorified skepticism, from which that which is settled is at once excluded. Like Lohen-

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grin, the problem must depart as soon as its name is known.

The classic example of this is found in the theory of atoms put forth by Democritus, which was a philosophical theory until it was demonstrated by Dalton, when it became a scientific principle. The same might be said, perhaps, of Empedocles' theory of evolution, which became a scientific matter more than two thousand years later with Darwin. These are examples of the philosophic anticipation of scientific truth; but, as a rule, philosophy merely looks back and reviews the results which have been obtained by empirical science. If it can pass upon these, as accountant and attorney verify and justify the matters brought before them, it can accomplish all that may be expected of it.

The "philosopher" no longer exists, and it is only in an archaic manner that we have used that term to indicate one who is interested in the affairs of logic and matters of metaphysics. The "philosopher" passed away when the "scientist" arrived, which was at the beginning of modern times; hence we might say that the last of the Schoolmen, who themselves were not pure philosophers, were the last of the philosophers. Locke, Kant, Hegel and Schopenhauer philosophize, but they are not philosophers like Plato and Aristotle. Science has changed all that. If, however, the speculative thinker is extraordi-

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narily absorbed in his ideas, and is able, further, to absorb the science of his day, he may still be spoken of as a "philosopher"; this was the case with Spinoza, hence we may speak of Spinoza as being the very last of the philosophers. But the situation in philosophy is akin to that in Faust's garden after the departure of Mephistopheles, when it was said, "The evil one is gone, but evil still remains." The philosopher has departed, but his philosophy still abides.

Those who advocate the study of philosophy have no desire to apologize for what seems like an unheard-of procedure on the part of the philosophic thinker. In fact, they glory in it as tho the paradox of a thinker without a field of research, like a patriot without a country, were pleasant to contemplate. At the same time, the defenders of faith in the unseen may point out that this other-worldliness is not as exceptional as it might appear, since it is indulged in by both religion and science, even when these are more realistic.

Philosophy, Religion, Science

Religion is famous for the way in which it has taught man to consider the unseen and to believe in such impalpable things as God and the soul. That which religion has ever kept before the mind of its adherent is the notion of a spiritual order in which man's true life is lived, and

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which, after this life, will become his true home. But religion has tempered this transeendentalism with various symbols, edifices, images, and the like, so that the flight from the world was not as complete as the belief in things spiritual might seem to suggest. Furthermore, religion has always been associated with certain practices, so that the strain of its other-worldliness on the mind has been relieved by the exercise of the will. Moreover, the idealism which philosophy set up once for all as an eternal present was looked upon by religion as an experience to be postponed until the future.

The scientific breach with nature in the guise of a landscape and practical order of existence was made by Democritus almost at the moment that Plato was taking leave of the world of sense and change. It is true that Democritus was a philosopher, but the materialistic trend of his thought and his particular doctrine of atoms makes it possible and expedient to view his system in the form of ancient science. In full independence of Plato, and indeed in the very opposite of the Platonistic mood, Democritus effected an escape from the world of every-day experience; only he descended below its level while Plato transeended it. One exchanged the given order for a world of atoms, the other for a world of ideas; but both agreed tacitly that rational thinking must create a breach between

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the world of common things and an order of theoretical entities. In the case of Democritus, this order was made up of infinitesimal corpuscles infinite in number, indivisible in their nature, identical in quality, and controlled by necessity.

But the most tantalizing form of the scientific repudiation of the perceptible world appears at the beginning of modern science, when the new astronomy of Copernicus came into being. According to this revolutionary view of the universe, man was called upon to accept an interpretation of things the opposite of what his senses had ever taught him. Common perception testifies that the earth is central and stationary, and it seems as tho the whole firmament moved around it: but the new astronomy set the earth in motion in an eccentric portion of the universe. In this manner, common sense was forced to yield to the theoretical notions of mathematics. At the present time, the unearthliness of science is receiving emphasis in terms of Relativity, which tends to reduce the familiar universe of real things to a gigantic system of waves, in which such familiar things as time and space, matter and motion seem to float about in ways which the lay mind must regard as decidedly uncertain.

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The World Is Too Much With Us

But both the religious and scientific breach with nature fail to measure up to the sharp and abiding break which is a commonplace in the history of philosophy; for with them, especially in the case of science, it is more a change from one form of physicality to another, while philosophy has been intent upon passing from all forms of the physical to a thoroughly mental order of being. Where there is philosophy in the classic sense of the term, there is always an effort to banish the natural order for the sake of installing a mental world of universal ideas, and these universals are the reals of philosophical speculation.

Philosophy differs from both religion and science, not only in the way it transcends the natural order of things, but in its fundamental ideas and modes of procedure. Hence it will be fruitful to contrast these three major conceptions of nature and man. First of all they may be surveyed in the vertical order of their development, with religion as the mode of primitive thought, philosophy as the method of the ancients, and science as the modern type of human culture. This is not to suggest that the entrance of philosophy is the departure of religion or the coming of science the going of philosophy. No; it is rather the suggestion that

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religion conserves the original dreams and presentiments of the awakening mind, that philosophy is the endeavor to substantiate as much of these as seems plausible, and that science is an attempt to view nature and man directly without much regard for the cherished beliefs or precious ideals which man has long indulged in. This must not be taken to mean that science is inhuman, since of the three forms of culture it has done the most to ameliorate the conditions of life on earth. It means only that science aims at creature comforts rather than at human character. Now, the contrasts which are to be made must naturally be from the standpoint of philosophy, for whose sake the importance of its companion systems will have to be minimized.

Philosophy and Faith

The most primitive and general reaction of the human mind to the world is found in Religion. Out of this fundamental faith came Philosophy, as out of Philosophy came Science. The religious reaction came into being and long held sway before man learned how to conceive of his view of nature and himself in the abstract forms of philosophy. The method which religion employed was that of belief, whose primary objects were God and the Soul. The spirit of such thinking was humanistic, or anthropomorphic, for it consisted in looking upon the objects of its be-

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lief after the manner of man. Now, it was just this anthropomorphism which offended the philosophic spirit, once it was awakened among the Greeks, and brought about both the breach between believing and thinking and the founding of philosophy.

The conflict between ancient philosophy and religion, by no means as sharp as the conflict between modern science and religion, was inaugurated by Xenophanes about the middle of the sixth century B. C. What Xenophanes attempted to do was to substitute a monotheistic conception of God for a polytheistic one, as also to represent the theistic idea after the abstract manner of philosophy. "God is one, supreme among gods and men, and not like mortals in body or mind. The whole of God sees, the whole perceives, the whole hears. But without effort he sets in motion all things by mind and thought." After this polemical preliminary, Xenophanes proceeded to develop a kind of Monism, for he asserted that Being is one and all-embracing, devoid of both genesis and destruction, and everywhere and always the same.

The effect of this critical monotheism, or monism, which was felt by Parmenides and Plato, Socrates and Aristotle, was more positive than negative, since it resulted in the development of a religious philosophy rather than in the destruction of religious belief. It was the beginning

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of what has since been the standard form of philosophy recognized as Idealism, Rationalism, Dogmatism, and the like. Wherever philosophy sets up the Absolute as its fundamental principle, there the influence of Xenophanes is felt even when not recognized. It lays down a method whereby reason takes the place of faith, and a metaphysical conception of the Deity tends to assume the position of a personal God.

But the anthropomorphism which Xenophanes sought to set aside in order that philosophy might supplant religion was not so easily dismissed. It is true that enlightened mankind has given up the idea of representing the Deity as a vastly magnified man, but not so true that it has ceased to look upon its problems with the eyes of a man. In place of a crudely anthropomorphic conception of Deity it set up a humanistic view of its own philosophy. It does this generally when in the form of Subjective Idealism it makes the being of things to consist in their being perceived, and when Objective Idealism looks upon reality as that which is thought by the mind. It is only because the emotions and practises of religion are left out of account that such idealism does not fall back into that anthropomorphism from which the radical Greek sought to deliver it.

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The Return of Anthropomorphism

The return of Anthropomorphism in the form of Humanism has been signalized in the present century by the development of Pragmatism, which in a way tends to undo the work accomplished by Xenophanes and his Grecian followers. But there is a difference between the critical Anthropomorphism of our day and that of primitive times, since the primitive mind in its naturalness glided into its man-like notions as, tho following the line of least resistance, while our Pragmatists have adopted their kind of Anthropomorphism because of their opposition to the Absolutism which had so long prevailed. The God of the Pragmatist may not be as human as that of the primitive mind, but He is thought of as finite, as is the case in the systems of Schiller and James and the writings of H. G. Wells. It may be noted at this point that the new physies, which attaches itself primarily to the name of Einstein, seems to lead to the idea of finitude generally in the form of finite space and a finite universe; but such a conclusion seems to follow from a mathematical abhorrence of the immeasurable, while in the case of Pragmatism the finitude of God is adopted as a belief of practical value and general utility for finite man.

Not only does the religious spirit of Anthropomorphism linger in the field of philosophy, but

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the leading ideas of religion persist, altho in different forms. These are the ideas of God and the soul. In the religious mind, which evolved these ideas, God and soul are entertained with warmth and thought of in terms of spirituality. The relation between the soul and God is experienced with emotion, considered in a personal way, and usually marked by a certain amount of moral enthusiasm. The spirit of the relationship is that of worship, which obviates the necessity of any deep psychology of the soul or any penetrating ontology, or metaphysics, of the Deity. It is the time-honored situation in the religion of mankind.

But when Philosophy, instead of manufacturing entirely new notions of its own, lays hold of the traditional conceptions of spiritual life, it changes "soul" into "mind" and "God" into "Being" or "Substance." That which is lost is the warmth of these original conceptions and their religious worth: what is gained is clearness and consistency. When this transmutation has been made, the enlightened believer is made to feel that his belief in God and the soul, while no longer so splendid, is made more substantial by its rational affiliation with such abstract entities as "Mind," "The Infinite Substance," "Spiritual Life," and the like. The whole case thus undergoes a change of venue from the anthropic to the cosmic. What was the soul with all its

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human needs and aspirations is now a thinking principle, while the former "God" has become the World Ground. The situation is philosophical instead of humanistic, and the problem of mankind is to solve the question of the Absolute rather than to enter into right, joyous and fruitful relations with the God of mankind's ancient faith.

A certain amount of this rationalism was adopted by Christian theology, which sought to preserve the warm traditions associated with the human soul and personal God; but when philosophy has been the main consideration, the prevailing atmosphere has ever been one of coolness, while the needs of mankind have been looked upon as tho they might be satisfied by clear ideas and convincing principles. At the present time, popular religion, while still interested in some conception of God and soul, tends to express itself socially, as tho it were wiser to exert the heart to love the brother whom one has seen than to attempt the love of a God whom one has not seen. At the same time, it is possible that religious education may have the effect, in part at least, of elevating the mind of the worshiper to the place where he will be able and willing to worship the kind of God which philosophy presents to his mind, and to exercise a form of love which Spinoza called *amor dei intellectualis*.

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Philosophy and Fact

The relation of Philosophy to Science is by no means as simple as the adjustment of religious belief to speculative thought. This adjustment was made at an early period, when man had little of the sophistication or his ideas little of the detail which have been experienced in modern times, when science has undergone its astonishing development. However, it may be said at the outset that science emerged from philosophy in a manner parallel to the development of philosophy from religion. As far as the spirit of this change was concerned, there was less animosity felt by science toward philosophy than in the parallel case of philosophy and religion, for the opposition between the new physics and the old metaphysics was confined chiefly to the philosophy of Scholasticism, with the theological notions which were involved therein. But, in the midst of common intellectualism, philosophy and science exhibit wide differences, altho the philosophy of the present, aside from its scientific affectation, is trying genuinely to overcome them.

Chief among the differences between philosophy and science is the obvious fact that science has a definite field of investigation, which consists of the physical world. When the mind deals with the problems of physics, it has at its dis-

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posals the rich and varied world of space and time, matter and motion, which are found to exist in a most palpable way and to behave in such ways as to permit scientific measurement. When one considers the problems of metaphysics, he is at a loss to recognize any distinct field of investigation, and in default of definite observation and exact measurement must content himself with general speculations about such vague and remote topics as substance and attribute, causality and change. It is true that the philosopher may borrow certain physical ideas, as matter or the conservation of energy, and just as true that the scientist may return the compliment by making certain use of metaphysical principles in connection with space and time. But the fact remains that philosophy must operate in the desert while his co-worker in science is privileged to cultivate a fruitful field.

Knowing and Thinking

This radical difference in the respective spheres of operation tends at once to provoke the conclusion that science knows while philosophy only thinks. Doubtless philosophy enjoys a certain kind of knowledge about things generally, to the effect that "whatever is, is" and "whatever happens has a cause"; but from such certain ideas philosophy is forever unable to identify any specific form of existence, as a

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chemical element; or to determine the cause of any phenomenon, as that of a falling body. It is true that by pure speculation Democritus arrived at an atomic theory something like the exact scientific doctrine of to-day, and it might be said that in his principle of continuity Leibnitz anticipated the doctrine of evolution; but these happy presentiments of the speculative mind do not encourage one to advance the idea that philosophy, like science, is an avenue to exact knowledge of nature.

The manifest difference in the fields of philosophy and science is reflected in their respective methods of operation. Both philosopher and scientist observe the general sense of regularity which pervades nature; but then the speculative mind becomes possessed of the notion that this can be expressed by concepts, or general terms, while the scientific mind presses on further to the idea of controlling laws. One is guided by logic, the other by mathematics. Philosophy is satisfied to group things in such a way as to obtain classes of things which may be assembled, as it were, in circles of being. Science, however, desires to arrange things, as it were, along lines on which the array of details and the varying modes of behavior may be represented and reduced to strict measurement. In both the philosophic concept and the scientific law there is intelligibility, as also a measure of universality;

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but the more flexible conception of natural law makes it possible for science to get into the very nature of things, as also to get control of natural forces and turn them in the direction of industry. Thus, instead of indulging a general contemplation of the world after the manner of the speculative philosopher, the scientific mind carries on a practical conquest of nature, whose forces are employed to convey convenience and comfort to human life.

The result, altho not necessarily the purpose, of science is utility. It may be that science will always retain a certain degree of pure intellectualism and will continue to operate in a spirit of disinterestedness, but the fact is that most of the results of science are absorbed by the utilities of human life. The principles of mechanics go into machinery; the laws of magnetism are used further to enhance the comforts of life; chemistry is turned into medicine; and biology ministers to the welfare of plant and animal life. Compared with these striking applications of scientific principles to the needs of human life, philosophy has practically nothing to offer, save perhaps the suggestion that true thinking will engender good action; but the way that logic serves ethics cannot be compared with the fruitful manner in which physics makes itself the servant of every-day life. Thus arose the old saying, "Philosophy cannot bake bread, but it

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can give us God, freedom and immortality.” Now, are not these products which science must ever fail to supply? We mortals cannot live by bread alone, and where there is no vision the people perish.

THE DIVISIONS OF PHILOSOPHY

THEORETICAL AND PRACTICAL

ALTHO philosophy seeks to cover the whole range of existence by means of its universal ideas, it has but two general divisions—the Theoretical and Practical. One deals with the rational ground of the world, the other with the goal of human life. The twin questions which provoke these forms of thinking are, What is? What ought to be? These are the mighty interrogations put forth by the curious intellect and puzzled will. They might perhaps be said to spring from the sensory and motor areas of the brain. The first concerns itself with facts, ideas, and principles of good thinking. The second *deals with standards of life, ideals of action, and the purposes which man would put into life.* One moves about within the sphere of Truths; the other operates within the realm of Values.

Both of these speculative procedures move along side by side and share the responsibility of philosophy, but the speculative outdistances the practical, since the intellect is richer and more flexible than the will; hence we know more than we do. We understand the nature of the world better than we grasp the use to which the world should be put, and understand how to

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conduct physical and chemical warfare better than how to end war. In this manner, a congress of intellectuals discussing science understand and agree with each other far better than the members of the League of Nations. Nevertheless, these two forms of philosophy, which may be called The Way of Knowing and The Way of Doing, are more interdependent than independent. One's practical attitude toward life is determined by his theoretical view of the world, while one's speculative view of nature tends to spring from his practical reaction upon the things of this world. "The kind of a philosophy which a man has," said Fichte, "depends upon what kind of a man he is," which might be reversed to say, "The kind of man that one is depends upon the kind of philosophy that one has."

If one looks upon the world as a system of ideas, he is likely to consider life as the realization of the ideal: if he tends to assume a favorable and noble attitude toward life, his "world" will probably be an orderly system of ideas. An absolutistic system like that of Plato will install the Good into both theory and practise. Epicurus will inject materialism into both thought and deed. Spinoza makes reason both the beginning of thought and the end of action. Schopenhauer sets up the Will-to-Live and determines his attitude toward life accordingly. It is possible for an

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idealist to be a villain and a materialist a saint, but such characters are far from consistency.

The Way of Knowing

The theoretical division of philosophy is The Way of Knowing, and reveals itself frankly in the science of Logic. This science is in itself a formal study which is supposed to discipline the mind, promote good thinking, and prevent fallacy; but in a less direct manner it serves as the framework for philosophies which may find it convenient to inject a certain amount of physical and psychological material into the empty container of pure reason. Thus from the logical form of procedure comes a more robust and realistic body of doctrine known as ontology, or metaphysics, which seeks the principles of sheer logic in such elements as substance and attribute, or thing and quality, permanence and change, space and time. These might be called examples of stuffed logic. Now, this kind of speculative thinking becomes even more natural and realistic when it narrows its vision down to a consideration of immediate existence, where, in the form of a Philosophy of Nature, it proceeds to inquire whether the course of things generally is guided blindly by mere Mechanism or whether there is sufficient purpose manifest in the world to justify a philosophy of Finalism, or teleology. At the present time, this philosophy of nature is

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centering its attention upon the question of Evolution, in connection with which the problems of Mechanism and Finalism become unusually acute.

The way in which speculative philosophy carries on its rational conquest of reality is expressed by means of various terms, which may be regarded as maxims or even trade-marks of systems. They are recognized as "Reason," "Ideas," "Categories," "First Principles," "The Absolute," and the like. All of these are examples of The Way of Knowing and may even be regarded as major premises in the argument which the philosopher desires to conduct. When they are of a looser and less logical form, these starting points of speculation, taken from physics and psychology, become "Matter" or "Mind," which make the work of philosophy easier to carry on and comprehend, but which do not thereby make it any better philosophy.

That which lies behind all this is the process of Thought, which consists in putting together the ideas which belong together. Our human ideas, which often arise in a purely circumstantial way, tend to follow the natural course of consciousness, which aims at immediate results of a practical character, with only a moderate regard for formal consistency. Philosophy observes the tendency of the mind to proceed upon a minimum of enlightenment, and realizes that

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life would never have gone on if man had waited for full information about the world and perfect reasoning on the part of his mind; yet philosophy cannot admit that such haphazard methods as man has followed should be accepted as guides for the critical intellect.

Folk Philosophy

The natural train of ideas, whose nature is purely psychological, is guided by instinct and perception and held together by memory and habit. In response to this sort of "reasoning," which may be called animal cunning or common sense, man comes to various practical conclusions to the effect that water wets, fire burns, stones fall, metals sink, woods float, and the like. He reasons that the sun rises and sets, and that the various species of animal life are really as distinct throughout as they appear to be now that they are developed. This produces a sort of folk philosophy which still holds in most practical matters and still serves the majority of men on earth. But it is just this practical way of reasoning which philosophy finds necessary to criticize.

If the human mind were thoroughly adjusted to the world of its experience, it would not be necessary for philosophy to be so crabbed as to discriminate between the ideas which merely go together and those which truly belong together;

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but as far as the human race has proceeded along the troubled stream of evolution it has not been able to experience the desired harmony between what seems to be and what really is, so that philosophy must keep drawing the perfect but imaginary lines of latitude and longitude around the rough globe of human experience, where the ideas which go together do not belong together and where the ideas which should associate are pathetically far apart. It does seem as tho the moon controlled the weather, since changes in the one accompany changes in the other; but even a minimum of reflection serves to show that there is no such arrangement in the world. It does not seem as tho the moon controlled the tides, but a careful consideration of the system of gravitation as far as it involves our solar system tends to substantiate this remote relationship. We must work our experience over and keep substituting for immediate impressions and casual connections the ideas of real objects in true relations. This is the primary work of Thought, on which, in the last analysis, all philosophy depends.

When Thought lays firm hold upon the world of concrete experience, it sets up a process of simplification which may well appal the lay mind, accustomed as this is to the richness and variety in the things of this world. This radical act of simplifying seems to impoverish the world

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and reduce man to a strict mental diet. Reality seems luxurious in its forms and modes of behavior, hence how can philosophy hope to grasp its meaning and express its message when philosophy has but a few poor "categories" at its command? This impromptu question is answered in a way by considering both the parsimony of nature and the severity of the mind which seeks to interpret it. Nature uses the same elements again and again, while the mind sees the same factors in what appear to be new situations. Luxury and novelty may shine upon the surface of nature in her holiday apparel, but the critical mind sees through all that is so purely decorative and discerns the simple nature of that which really exists. Unlike the naïve ancients, we may not be able to reduce all reality to the elements of earth and air, fire and water, but the most thorough analysis of matter fails to reveal so many as a hundred different kinds, or atoms, and the number of these is likely to be made smaller as the analysis of matter is carried deeper. Indeed, it may turn out that all things are made of one stuff, and that this isn't a stuff at all.

The principle of simplification, which tends to make nature appear so formal and scholastic, appears again in the ways in which nature conducts her operations in a universe where so much seems to be going on at the same time, as tho

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in a vast cosmic circus. The actual modes of behavior which matter follows are distressingly few in number at best, and the tendency is to simplify them, as Einstein seems to have done by placing mechanics and magnetism in a uniform field of force where the colorless principle of gravitation seems to be in complete control of the cosmic situation. In obedience to this impulse toward homogeneity, philosophy proceeds to dispose of the whole universe upon the basis of a single principle, like Substance or Causality, whereby all that exists and works is grasped by the intrepid advocate of pure intellectualism. Thus, the whole panorama of endless nature, as well as the majestic program which she carries out with infinite variety, is reduced rationally to a fundamental principle which the human mind conjures up as tho it were but to please its fancy.

The Way of Doing

Practical philosophy, or The Way of Doing, may not reveal the same degree of simplicity or render itself amenable to an equal degree of systematization; but even with the organic world, where life and growth, movement and consciousness are paramount, the unity cannot be wholly hidden. Even in the case of man himself, detached from the world so that he is free in his movements and versatile in his activ-

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ities, a similar parsimony prevails. For the questions which man must ever ask himself are scarcely other than those of the Gentiles, or "What shall we eat and drink? Wherewithal shall we be housed and clothed?" What are the activities which invite the will save those of war and industry, of civilization and culture? And what are the inward motives which propel mankind toward his works but those of a desire for pleasure or a vague aspiration toward perfection? The varieties of human activity, as these appear in economics and ethics, are not sufficiently original or novel to enable the human will to stray beyond the general principles which philosophy so confidently lays down as final.

In various ways, practical philosophy follows the analogy of speculative thinking about the inorganic world in that it questions whether its fundamental principle is found in sense or reason and whether it is wiser for man to grasp at objects of immediate worth or press on toward those of more remote and refined value. When the practical side of philosophy is made to include esthetics and philosophy of history, the same noble narrowness prevails, for the considerations which control the situation are such as were known to Epicureans and Stoics centuries ago, if even then they were not old stories. Life as lived may appear astonishing and novel, since man is still a child in his activities; but

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life as thought is a matter capable of almost complete simplification. Just as speculative philosophy lays down its fundamental principles as norms for thought, so practical philosophy lays down basic rules as guides for action. When ethics makes this attempt, it trims down the overgrown will to suitable size and convenient shape, as a tree is shorn of its broad branches. Life is then made rational in the way that the world is found to be rational. Ordinarily one follows the paths of instinct or immediate impression; one responds to inclination or follows the lines of habit. He sees in pleasure an immediate benefit and takes the self to be the true terminus of his activities. But when philosophy lays hold of the will, as a rein upon a horse, it tends to substitute for these present benefits the permanent values of life as life is interpreted by thought. And when this exchange of values from the immediate to the remote is effected, man's life begins, and the human species distinguishes itself from the animal order whence it sprang. Thus does the drama of human life in its long and tortuous history adjust itself to a few unities which philosophy is not slow to determine.

Man a Valuing Animal

The grand divisions, then, are such as to yield Truths and Values. When philosophy is of the theoretical sort, man is regarded as the classic

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homo sapiens, whose chief concern is the discovery of truth. Doubtless this passion for pure cognition in independence of all interest and prejudice has been exaggerated by admirers of philosophy and the exponents of science; but the search for true things and real relations between them must still be accredited to the creatures who, to-day, are regarded coarsely as constituting only one among various species of animal life as these have come into being by the general struggle for existence. Yet man is more than thinker, and his activities are other than those of his intellect. "Man is the valuing animal as such," in Nietzsche's phrase, and must be looked upon as a creature who seeks places where he may lay his hands as well as those where he may rest his gaze. To think and to act—such is the life of man, as philosophy views it. Undoubtedly these severe views of human life need to be softened and enhanced by concrete science and practical economics; but this is not to repudiate the sentiments of pure philosophy, which looks upon its hero as the creature whose chief concern is the validity of its ideas as these spring from the mind, and the value of the impulses issuing from the will.

But these details of specific thinking and useful action are not overlooked by philosophy when it lays down its fundamental principles of thought and final principles of action. That

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which the philosophical mind desires to do is to draw about all these particulars and practicalities the circles which it draws when it deduces its universals. Philosophy excludes nothing, but includes everything. Is it so astounding, then, that philosophy, charmed and convinced by its own ideas, should open an abyss into which are plunged all kinds of matter and all forms of life, all movements in nature and all activities of mankind?

The Methods of Knowing

In most of our moods, we are in the habit of thinking that knowledge arrives at its object the way a bird flies to its nest. We see, we know and comprehend things well enough to carry on the average concerns of our lives. When it comes to larger notions of a theological or political character, we have either unwritten traditions or documents which seem to authorize the beliefs we entertain, and if these do not always work perfectly we feel that we are able to worry along somehow without any systematic philosophy. Hence we are inclined to feel perplexity and lose patience when philosophy approaches us with a theoretical program, all of whose important terms end with a suspicious "ism." We are persuaded that we can think as we do verily live without these annoying "isms."

Now, philosophy is convinced that, as we can-

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not exercise the function of vision, which gives us brightness and color and enables us to see things, without the elaborate, delicate organ of the eye, so the knowing process cannot operate unless there is a fairly elaborate mechanism behind it. With a complicated scheme of sense-organs reinforced by the nervous system we may be able to feel our way about, especially as our animal nature is fitted out with instinctive arrangements which guide life toward the essential nature of things; but when we desire to come to an understanding with things so as to proceed consciously and carry out major enterprises in the world, we feel the need of organized knowledge. This knowledge is elaborated by science; the theory of it, whereby it is explained and its limits prescribed, appears in philosophy.

Old Ways and New

The theoretical formulations of knowledge, each of which is supposed to give a bird's-eye view of the intelligible field, are four in number: Rationalism and Empiricism, "Mysticism" and Pragmatism. They pair off about as indicated. Rationalism and Empiricism have long entertained a rivalry which may be called a cordial hatred, if it is understood that the cordiality in question has to do with their readiness to agree that some sort and degree of intellectualism is

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desirable for good theory, and about as necessary for the interpretation of the objective order. "Mysticism," which must be written with quotation marks, and Pragmatism do not define themselves so well or adapt themselves so directly to their subject-matter; hence they are not so easily contrasted or mutually distinguished. Nevertheless, this latter pair may be described as being anti-intellectualistic methods of arriving at the same truths which so long have lured the elder theories of knowledge. They represent the philosophical theories of the twentieth century.

But if we were to be more liberal in our historical interpretations, we might be inclined to relegate Mysticism and Pragmatism to the very *earliest period of human thought*, for both are "new names for old ways of thinking." Undoubtedly the human mind looked into objects, events and experiences in an immediate way before it took up the process of analysis; and just as assuredly did it consider the consequences of thoughts, as well as acts, before it elaborated any principle of sufficient reason or logic of conclusions. But as far as philosophic theory is concerned, these ancient forms of thought are newcomers in the school of speculation. They were operative when thought was in its infancy; they appear again when thought seems to have overshoot the mark and landed in a field of super-

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sophistication. Originally offered as mental nourishment, they are now prescribed as cures. They have their place in the present system of knowledge, where they are of unusual value in emphasizing the need of a content to render knowledge natural and human. Furthermore, there are certain traits and tendencies in our contemporary life which can be expressed in no ways more suitable than those of Mysticism and Pragmatism.

But in spite of the advantages resulting from the application of mystical and pragmatic methods, it must be said that these theories can never stand alone the way Rationalism and Empiricism have done. They protest against some of the excesses of these modes; especially Rationalism; but if rationalist and empiricist were to remain silent, mystic and pragmatist would have nothing to say. The opinion just expressed may be clarified and fortified by the added assertion that, if these anti-intellectual theories had enjoyed a clear field from the beginning, they would have developed nothing or else a conception of the human mind which, assuming that it could be framed, would be wholly unintelligible to us to-day. We find fault with Plato and Aristotle, Spinoza and Kant; but if, instead of developing an intellectualistic conception of things, they had turned their minds toward these human but anti-intellectual modes

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of mind, we should have to regard their writings as closed books. For this reason, it will be necessary to gain a clear and fairly comprehensive view of the older and more orthodox theories before we can enjoy the amiable distortions of the newer and more striking ones.

Near-Sighted and Far-Sighted

In spite of the fact that both Rationalism and Empiricism have always moved within the common field of intellectualism, they have differed sharply between themselves. Their exponents have assumed that it must be either Rationalism or Empiricism, an inward conception of the knowing process or one which placed its affair upon the world of things. This may be taken to mean that we arrive at knowledge by either conception or perception, and thus make use of an abstract idea here or a concrete fact there. If such a thing as knowledge may be represented in a vertical way, then Rationalism assumed that we arrived at truth by descending from the general to the particular, altho often it had difficulty in deciding just where this superior general idea had come from. On the other hand, if we incline toward Empiricism, we use the same line of procedure but attempt the ascent from the particular to the general.

If such a linear way of representing non-spatial things may further be tolerated, we may

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ask whether knowledge appears at the fore end of the line in what is called an *a priori* way, or do we find it at the far end in an *a posteriori* position? This question of priority, which to the lay mind may seem as inconsequent as that of position of dignitaries at some social function, has always affected philosophers as a matter of unusual importance. But just as important is the question of the originality of knowledge, or whether the process of cognition, which is to give us our sciences, was direct or derivative, native or acquired? Did knowledge leap directly from the brain, as Minerva sprang full-armed from the head of Jove, or shall we say of it what was said of a less august character in literature, that it "just grewed"?

The Unnatural Order of Events

When we consider how man creeps before he walks, and moves along first on roads then on steel tracks before he flies, we are prone to conclude that the empirical mode of thinking about our knowledge is the more plausible one. It is easy to perceive things, but not so simple to reason about them, just as walking on the feet is less difficult than walking on the hands; hence we are likely to believe that the slow and natural method of empiricism is more akin to man than the decisive and critical method of rationalism. If our philosophy were meant for Greek gods

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who contemplate their world from the skies, the method of deductive rationalism might make its appeal; but since we are creatures of earth and to the manner born, ours, it seems, must be the way of reasoning from concrete particulars. Now, in the psychological order of every-day experience, this conclusion in favor of empiricism may be reasonable and just, but the actual development of knowledge in art, science, and philosophy is such as to throw the weight of evidence back upon the side of the more severe and superior conception of the knowing process.

General knowledge of a particular and practical sort is doubtless something picked up little by little in the course of experience, but organized knowledge seems to have come about in the opposite way. Knowledge, like charity, should begin at home; but knowledge in the strict sense of the term reveals a remote and foreign origin. The development of the fine arts exemplifies this general tendency to proceed from the large to the small—without, however, contributing anything convincing to the question under discussion. The esthetic tendency in the human mind expressed itself laboriously and ponderously in perfecting the art of architecture, whose earliest examples are those of a gigantic nature, as the Pyramids in Egypt. The passage from Oriental architecture to Grecian sculpture reveals the artistic spirit still dealing with solids, but working upon

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smaller objects in the form of statues. Long after the development of such solid arts came the perfection of painting upon a flat surface in the spirit of representation, which may have represented as much beauty but far less in the way of problem and task. Finally came the art of music, which analyzed the tones that man had heard and produced from time immemorial. Does not art, then, create the impression of something like the deductive descent from the general to the particular?

Much more to the point, because of its purely intellectual nature, is the development of philosophy, which came upon the scene and in a way perfected itself deductively before the logic of induction was worked out in theory or applied in scientific procedure. If what may be called the natural course of events had prevailed, the Greeks, who were both skilful and thoughtful, should have worked out our science and we moderns should now be busy on their philosophy. They should have produced a Newton and Darwin, as might have been the case with their Archimedes and Empedocles, and we should have our Plato and Aristotle in the form of Einstein and Edison. But the actual order of thinking was the reverse of this, since we are busy with the particular and practical as they were absorbed by the general and cultural.

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Knowledge Did Not Begin at Home

In the case of our natural sciences, we have a striking example of the descent from the remotely deductive to the immediate and particular, since the scientific mind has retreated from the most distant and alien region of the inorganic to the narrowed circle of life and consciousness. Let one imagine the course of culture under the auspices of common sense, and he would have man's mind devote itself to the human organism, thence to proceed to life generally, and after that turn his attention outward toward the earth to end his investigations with the far-off, useless stars. But the actual course of the sciences has been from astronomy to *mechanics*, from *physics* to *chemistry*, from chemistry to biology, and from the science of life to psychology. Our sciences have descended from heaven to earth; they placed deduction on the throne before they set induction to work. They have had their triumphs with alien matter which cannot be equaled by similar ones in allied life and mind. They have exemplified the paradox of philosophy to the effect that we are enlightened about things we do not experience, and ignorant of the things we really know. For we are at home in the distant land of things different from and antagonistic to man, and strangers in our own community of living things and

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conscious minds. We can always foretell the future situation in the skies, but can never be certain what will be the weather in the region where we dwell.

Now the foregoing, which might seem to be an excessive exaltation of Rationalism, is really no more than an attempt to state justly the claims of that larger intellectualism of which Empiricism is an integral part. Now that there are in the field of knowledge what might be called "heterodox theories," it is well to emphasize the intellectual character of the knowing process, which apparently cannot be accepted as obvious. It will be almost as necessary to show that Rationalism and Empiricism satisfy the inward desires of the human spirit as to show that they meet the demands of the external order. If we may so speak, nature might be thought to be somewhat interested in the affairs of reason and experience, since they attempt to render her intelligible. But nature could not be thought of as being concerned with the fortunes of mystical or pragmatic modes. These are for the satisfaction of mankind in its more human and practical aspects.

The average work on philosophy, especially in the seventeenth and eighteenth centuries, was wont to be entitled an essay or treatise on the "human" understanding. Now, the concerns of humanity, which seem to make appeal to the

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anti-intellectualist, appear to be met in such works, or such is the natural supposition. But the quality of humanity which is considered by the intellectualist is that of man thinking, or *homo sapiens*. He it is who is expected to be satisfied by clear ideas and cogent reasons. Such man is the creature who finds happiness in good thinking, as men are happy when they think correctly—*C'est le bonheur des hommes quand ils pensent juste.*

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THE METHOD OF RATIONALISM

THE term, "Rationalism," is often used to indicate some radical view of religion, as tho it were none other than free thought. But this is not the Rationalism of philosophy, which implies the supremacy of reason over sense, not the superiority of reason to faith. A "Rationalist" of the irreligious sort may be quite innocent of logical procedure, while a religious person may be quite adept in the use of logic, as in the case of the theologian. The Rationalist in the strict sense of the term may be regarded as the typical philosopher, since his deductive system has always been in the foreground of speculative thought, altho sense may still have some place and experience a part. This kind of Rationalism is easily identified in mathematics and logic and can be seen in the concrete sciences, like physics and chemistry, altho not quite so clearly. When thought encounters the sciences of biology, psychology and sociology, the severe lines of rationalistic procedure are relieved by the freehand drawing of the empirical mind. Rationalism itself is the Minervan type of think-

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ing, since it springs full-armed from the brain. It is wisdom crying out and understanding putting forth her voice.

Knowledge by Reminiscence

The rationalism in which a confident philosophy so often rejoices may seem to rest upon "innate ideas" which are independent in their origin and intrinsic in their validity. These independent thought-units, like the axioms of geometry and laws of logic, appear to be self-evident in character and intuitive in form. They are supposed to equip us with a given stock of knowledge, so that our education in the world is fully facilitated by what we bring to its school. Let any one recall his painful experiences in learning certain truths of mathematics, as the multiplication table or the simpler propositions in geometry, and he will remember how, after the truth had been acquired, it seemed as tho the truth had been there all the time, so that studying seemed like a mental process of returning to the original source. It was a sentiment of this sort, elaborated on a large scale, which impelled Plato to conclude that knowledge was not the discovery of new things but the recollection of old ones, as these had been acquired in a previous state of existence. When we proceed rationalistically, we seem to

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walk backwards with our faces toward the light which shines from behind.

Even in the sophisticated days of our science, particularly when we have Evolution in mind, it seems as tho we were using old truths which themselves have come down to us, not from any mythological state of preexistence, but from the less remote past of our ancestors. They acquired these truths by the pioneer contact with the coarse world, but we their children have come into their mental estate, which we need but keep up and extend. Or our logic is like our law in that it makes present decisions in the light of past precedents, for what has preceded in the experience of the race is our guide in dealing with present problems. Philosophy will naturally exult when it observes how its precious truths, instead of being confined to a narrow and uncertain present, are relegated to a past, be it mythological or ancestral; but it is not inclined to accept the history which truth may have had as a guarantee of its certainty.

Truth Is Like Eros

That which cheers philosophy in these theories of knowledge, which include the august past in the perceptions of the present, is the idea of elevation; for both mythology and evolution tend to lift our ideas out of the local and temporal situation in which we find and use them;

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and, while we cannot wholly locate them in their strange home, we can rejoice in the realization that they are not limited to the immediate neighborhood of our every-day thinking. But what philosophy desires to do with its ideas is to deliver them from all special contact with space and time, and place them within a vast circle which our slender thought will touch at a tangent only and not try to embrace. Our lust for power may lead us to exercise dominion over earth, but we prefer to feel that the heaven of ideas is something which we cannot subdue, but which must forever arch over us with an authority all its own.

Naturally we wish to participate in the glory of these unearthly notions and have our place in the sun, but we would rather not have over these general notions the power we have over the things of this world in their concrete particularity. We want our ideas to be ours and not ours, here but everywhere, looked at in the present but surveyed under the form of eternity—*sub specie æternitatis*, as Spinoza expressed it. Our truth shall be like Eros, the oldest and youngest of the gods, for we shall view it as forever in the past but just as fully in the present. Such is the spirit of philosophy when it is interpreted by rationalism.

The whole course of philosophy is that of Rationalism, with occasional dips in the direction

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of Empiricism and seasonable objections which are sure to be forthcoming from the exponents of experience. To review its history is to observe the peaks attained by the classic, scholastic, and rationalistic thinkers of the last twenty-five hundred years. Apparently little else was thought of than the supremacy of reason over sense until modern Rationalism as a professional doctrine encountered the competition of the Empirical school. The result of this competition, wherein the respective defenders of contrary faiths sought to dispute each other into defeat and themselves gain at least a verbal victory, was the conflict between the Rationalist and Empiricist of the seventeenth and eighteenth centuries. This was not decided until 1781, when Kant produced his *Critique of Pure Reason*, since which time the case has been appealed upon more than one significant occasion. It is customary to attribute the origin of such rationalism to Descartes, but it might be wiser to realize that Galileo was its real founder.

Descartes' Discovery

In the year 1633, when Descartes' thoughts were ripening into a condition of publication, he received the news of Galileo's conviction on Copernican grounds. Now, the work with which Descartes meant to inaugurate his philosophical system, *De Mundo*, had to do with that most dis-

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agreeable of topics—the motion of the earth. Evidently Descartes, altho a soldier, had no desire to share the fate of Galileo, still less that of Bruno, who was burned at the stake in 1600; hence he abandoned his astronomical enterprise and contented his speculative instincts with his *Discourse on Method*, in which he discussed the manner rather than the matter of good thinking. Paradoxically enough, this published work had to do with skepticism, and the author, who feared to announce his rational belief in such a thing as motion, did not hesitate to indulge doubts about everything.

But the kind of doubt in which Descartes dabbled was of the most academic variety and had to do further with the private cogitations of his mind, hence there seemed to be nothing dangerous in such a species of skepticism. The French are used to it by this time, since, beginning with Montaigne and Descartes, they have had their Rousseau and Voltaire, their Comte and Taine, Renan and Anatole France, and now have Bergson as the latest acquisition to skeptical *dilettantisme*. Moreover, the kind of skepticism in which Descartes indulged was so easily checked by another kind of thought that one may regard the doubting process as a kind of intellectual inoculation instead of a downright disease. The whole process of rejecting and accepting lies in the hands of thought, and Des-

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cartes was in perfect control of his process of cognition. The story of his skepticism has been told often in academic circles but should be noted anew here.

The classic language of this self-inflicted skepticism is as follows: "I will now close my eyes, I will stop my ears, I will turn away my senses from their objects, I will even efface from my consciousness all the images of corporeal things . . . and thus holding converse only with myself and closely examining my own nature, I will endeavor to obtain by degrees a more intimate and familiar knowledge of myself." Is this a metaphysician in doubt or a mystic at prayer? This sort of introspection, which was an old story in the Middle Ages and had worked most pictorially and effectively with St. Augustine, is now taken to be the starting point of our modern philosophy. The swift descent which Descartes made into his soul, as if to discover whether it was seaworthy or not, was immediately rewarded; for the act of doubt implies the act of thought, and he who thinks exists: *cogito, ergo sum!*

The Egoistic Eureka

This Eureka of modern philosophy is as charming as that of ancient physics; both are supposed to contain the specific essences of their respective subject-matters. By means of

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this psychological act, mind was separated from matter and the problem of psycho-physical relationship set up to annoy Spinoza and Leibnitz in their day, to confuse us in ours. Yet how adolescent was the skepticism of this Gallic genius when it could think of shutting out the knowable world of nature merely by closing the eyes and stopping up the ears! And how equally naïve to accept the idea of God which he had just doubted simply because introspection reveals this idea immediately after it has disclosed the inherent sense of selfhood! Just as unsophisticated was it for Descartes to return to his original belief in the world of things because of the notion that the Deity who gives him his cosmic impressions was "no deceiver."

That which concerns philosophy at this point is the Cartesian mode of arriving at the idea of selfhood. If we credit Descartes, we shall be inclined to think that the self is easy to find and the world difficult to discover, when most of our experiences and reflections have brought us to the very opposite conclusion. The things of this world are ever with us in their solid, stubborn exteriority, and it is only now and then, in what Dostoievsky calls the "special, sudden moment," that we get so much as a glimpse of the self in the form of a gentle glow which is immediately engulfed in the glare of physical objects. And even when we do find

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a flicker of self-consciousness, its fugitive character is such that we hesitate to base upon it any belief in a soul, for the kind of *cogito* which we enjoy so occasionally does not convey any accompanying *sum*.

But the self of Descartes' rational psychology made its appeal to his school, among whose members, so tradition says, was a group of egoistic enthusiasts who went as far as solipsism, or belief that the self is the sole object of existence. History has not yet revealed just who composed the solipsistic circle, and when, if ever, their names are brought to light, philosophy will have to consider how there could be a group of solip-sists any more than there could be a congregation of hermits or a flock of hermit thrushes. Even Kant was impressed by the importance of Descartes' psychology and went out of his way to show that the proposition, "I think," itself acceptable enough, cannot be used in such a transitive way as to carry over to an "I am." Impressed was Kant, indeed, and so deeply that, in attempting to determine how much such psychology implies, he was so inadvertent as to grant that it proved an "I am"; whereupon his English translator rushed to his rescue and stated, as Max Müller did in the second edition of his version, that in this place in the *Critique* Kant's *ich bin* really means an "I think."

The Cartesian *cogito* would not be so bad in

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itself as a bit of psychology, or as the basis of "Soliloquies" and "Confessions" like St. Augustine's, but the psychological principle of Descartes is supposed to be the basis of a deductive system which follows a geometrical method out into a mechanistic scheme of philosophy. A "Self" of some sort, like that of Kant or Fichte, might be able to bear such a weight, but not the tiny, introspective self of Descartes. For it is necessary to think about something, an object or an idea, and not surrender the inner life to mere awareness or pure cogitation. It is true that Descartes entertained the idea of God, which, in the form of a Creator or World Ground, Absolute or Highest Good, can afford abundant material for reflection; but even here, when he was imitating the medieval Anselm of Canterbury, he did not think of any definitive notion of Deity but only of his inward impression of Deity. Hence Descartes, with his flexible psychology, establishes only the belief in God; the theological idea of God, which Anselm sought in his ontological proof, escapes his inward system of private sentiments.

The Leviathan on a Hook

Canst thou draw out the Leviathan with a hook? Could Descartes deduce from his norm of self-observation any such system of Theism or Mechanism as his philosophy appears to prom-

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ise? Could he pass from the personal axioms of psychology to the axioms of pure, colorless and impersonal geometry? Yet that is exactly what he attempted to do, for he was charmed alike by the simplicity with which he could move about within the cool recesses of his own soul and the ease with which he could proceed through geometrical space and press on, as tho coursing through the air, to certain demonstrations. That which resulted from the pursuit of the geometrical method was a severe system of mechanics which laid hold of practically all existence and reduced it to automatism. All that was saved from this juggernaut was the soul of man, which escapes, as it were, by the skin of its teeth by being a conscious automaton.

What Descartes discovered within himself was thus something of a dual character; it consisted in both the psychological and the physical, for it had to do with the axioms of both the self and space. He went from one to the other as a traveler goes from sea to land, and gave the impression that his journey was not broken, but that the spirit of consistency marked his complete passage. But to review this original system of modern rationalism is to feel that there is some measure of contradiction between the personal and mechanistic. What he might have done is a different story, and doubtless an idle tale. He might have more fully glorified and as deeply

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developed the concept of consciousness, which he had apprehended when he discovered himself and the self. This was a promising principle, since it yielded further the idea of God as a super-consciousness, and might have been developed intuitively something after the manner of Bergson. But Descartes was too fully impressed by the possibilities of mathematics and too thoroughly drawn in the direction of modern mechanics to indulge in the ideals of mysticism when the principles of mechanism held out such promises; hence he chose the mechanistic way of reasoning and maintained the conscious self as no more than a symbol. By means of its intrinsic consciousness, the self was saved from the system of mechanism, but even in its privileged position it had to undergo a kind of rationalization to make it something like the exterior order, and it is just this rationalistic discipline which Descartes takes up in his severe treatise on *The Passions of the Soul*.

Primogeniture in Philosophy

" Now it was the notion of the "innate" by means of which Descartes inaugurated the rationalism which he did not so thoroughly found. His service was less logical than chronological. When he referred to an inborn principle as the source of his philosophic authority, he seemed to be employing the idea of right by primogeni-

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ture instead of reason and justice. Hence rationalism could not find itself until it had decided upon a fundamental principle of a different sort, which involved a change from psychology to logic. This basis was adopted when philosophy introduced the idea of the *a priori*, a conception far more difficult to handle than that of innateness, but all the more plausible and satisfactory. Nevertheless, the two conceptions have something in common in that both alike are opposed to the idea of letting time have much of a voice in the matter of deciding the questions of truth. Herein is found a severe lesson for our thought, which is so confident about modern science and so conceited about recent scientific achievement that it believes in the eternity of the present. The past doesn't count, for all its ages were either dark or nebulous ones, but at last we have emerged into the clear light of truth.

But philosophy, altho it does not care to stress any historical conceptions of past and present, is determined that we shall see things in the light of larger views, however dim, rather than in the glare of the present; hence philosophy must insist that the source of light is as stationary as the sun in the solar system. The movement in the case is a local affair of the earth. In this spirit, philosophy insists upon the priority of ideas, a coming before in order

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of excellence if not in the sequence of time. But if for the moment we continue to use the idea of priority in a temporal manner, we may suggest that our ideas in mathematics and logic are prior to our exact knowledge about them in concrete experience. The perception of this it was which led Plato to use the myth of pre-existence. The importance of this it was which induced the Schoolmen to think of universal ideas as prior to particular things, as *universale ante rem*. Actually we come to know and have dealings with these universals of number, being, cause and the like, after we have seen them embodied in or exemplified by the things of this world, as *universale post rem*; but in spite of this fact of experience philosophy keeps on insisting that that which came after really was before. Now, it is not so much priority to experience, but independence of it, which philosophy is insisting upon.

Before and After in Thought

The temporal idea of priority to experience, which might better mean the primacy over experience, comes into full view but not fully clear form in the rationalistic doctrine of the *a priori*. According to rationalism, there are truths which are known and judgments which can be formed prior to and independent of any experience with the objects which they involve.

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This supreme doctrine of the rationalistic school has enjoyed various forms of statement which have had to do with the explanation of the *a priori*, not with the justification of it as a form of reasoning. According to Plato, the essence of the *a priori*, as has been noted, may be understood by dating back the origin of an idea to the remote past of man's preexistence. The chief value of this poetical notion was to take the truths in question of the present, where experience is dominant. In the Scholastic mind, the *a priori* signified the knowledge from causes rather than effects, which, again, dates the *a priori* back to some prior period. But these two conceptions of the *a priori*, so remote from logical thinking, have little to offer those who to-day desire to discover just how this magisterial doctrine is to be understood and accepted.

In the Transcendentalism of Kant and the Realism of contemporary thought, the problem of the *a priori* resolves itself into the question whether this principle is to be located subjectively within the mind itself or objectively in an external order of some sort. But both agree in affiliating the mind more or less closely with a principle of knowledge which seems to bestow the sublimity of a Greek god, so that all of us, in spite of our evolutionary ancestry, are really descendants of Apollo, the very god of intellect. In the case of Kant, himself an Olym-

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pian figure in philosophy, this deification of the human understanding is unusually clear and emphatic. For, according to this master transcendentalist, it is by virtue of the very nature of the mind that man comes into possession, or even himself forms, these supreme principles of rational thinking.

Our modern Realism, which witnessed the development of a strident naturalism of which Kant was unaware, is willing to preserve the *a priori*, but not so ready to attribute its validity to the idea that man's thought about it is the basis of that validity. The realist is inclined, so it seems, to look upon the Kantian *a priori* as something akin to the Platonistic in the sense that both of them tend to attribute too much importance to the part which the human mind plays in the doctrine. According to Realism, *a priori* propositions signify relations between universals without these relations being either mental or material. When this view is held, man himself loses somewhat of the dignity which he inherited from Plato and Kant, but he may perhaps console himself with the thought that the *a priori* still abides as something independent of mere experience. For it is elevated above the existential order of time and space and located in a transcendental realm where its purity and certainty are preserved.

But just what does the *a priori* mean for

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thought and how may it be illustrated? To speak of it as something independent of time and space is to tell what it is not; what it is has yet to be shown. Now, the *a priori* is non-spatial in the sense that it is universal; non-temporal because it is necessary. Mathematical *a priori*s hold good in all places and at all times; that is, they have nothing whatsoever to do with what is local and temporary. Twice two are four, not only here and now, but everywhere and at all times; not only on earth, where we human inhabitants discover and apply this typical truth, but on the planet Mars, if it have inhabitants with an arithmetic, and on all the planets whether there are mathematicians there or not. Make the sum of these twos anything else, like three or five, and both reason and reality balk. But what examples of the universal and necessary are in the proud possession of the human mind?

How Thought Anticipates

In explaining the meaning of the *a priori*, we have already exemplified it, if only in the particular case of the mathematical. Here are found the greatest number and the best illustrations of those universal and necessary truths which lift themselves out of space and time, and which exist, or obtain, in a celestial realm of their own. If, for a moment, we allow the empirical

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to put in a protest and advance the claims of the *a posteriori* or opposite method of calculating, the *a priori* may stand out more clearly and appeal more convincingly. The *a posteriori*, to speak of it in that way, will insist that the simple equation in mathematics is something with which the mind was not originally furnished, else there would be no need of education, since the individual could let the *a prioris* issue forth from his mind as shafts of light from a flame. How much more plausible seems this objection when one considers the more difficult equations and theorems of higher mathematics! Are these to be had for the asking, and do we mortals bathe in truth as in the sunlight of the skies?

The rationalist, or *a priorist*, as we might call him, admits the point of this plausible objection but considers it a matter of pedagogy rather than of philosophy. It is not the manner but the matter; not how we come to know our *a priori* mathematics, but what they are like once we have counted on our fingers, used an abacus, written numbers on paper, or used some other helpful device. We may have to be convinced within ourselves, but the proposition in question does not have to be proved. As a matter of fact, now that we have performed this simple problem countless times, we are no more fully convinced of its truth than we were at

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the beginning. We do not say, "It has been shown that when two couples are put together the result is a quadruple," for a truth of this sort need not be "shown" at all. Just how we know or recognize the truthfulness of the twice-two-four situation, whether by intuition or otherwise, is another question; but the fact remains that we accept it as something above and below all empirical proof.

The Rope-Stretchers of the Nile

When we advance from the intangible realm of number to the more perceptible realm of geometry, it seems as tho we had still to shake off the spatiality of which the *a priori* is supposed to be independent, since a geometrical truth is apparently more "real" as it is more pictorial and earthly. Suppose we consider the "Pythagorean Theorem," which is recognized as a proposition to the effect that the square on the hypotenuse of a right triangle is equal to the sum of the squares on the other two sides. This gives an equation like that of twice two are four, but altho it is more vivid it does not appear as simple and *a priori*. Now, the tradition in the matter is that Pythagoras came upon the truth which bears his name by observing the work of Egyptian "rope-stretchers," or surveyors, who operated with a rope twelve units long subdivided into units of three, four and five. When

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this rope was made into a crude figure, it was found to form a triangle with the five-side balancing, as it were, the three and four.

But Pythagoras went farther than the rope-stretchers, who had observed the sheer triangularity of the figure; Pythagoras observed that the five-side was able to maintain itself, so to speak, against the other two, whose sum was so much greater, even when all three of the sides were squared. What he saw was that 3 square plus 4 square is equal to 5 square, as 9 plus 16 equals 25. When these three numbers were doubled, trebled, quadrupled and so on, the same relation between lesser sides and the larger one was steadily maintained. Pythagoras had stumbled upon something, but that something was gold. He was in a position to demonstrate where at first he had only observed. What he proved was not something about existing triangles made of rope or any other material, but something about triangularity in the pure space of geometry. The theorem was applicable to real objects in physical space, but was demonstrable with thought-of objects in ideal space.

Once this proposition was proved by Pythagoras, it was true for all time and all places, since it held of itself in a way remote from the actual world, "the painful kingdom of time and place where dwell care and canker and fear," as Emerson expressed it. The fact that Euclid

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re-demonstrated the principle of the rope-stretchers and made it a proposition in his work on geometry, and the further fact that from the days of Pythagoras geometers have corroborated the truth about the triangle, has nothing whatsoever to do with the truth in question.

When modern science demonstrated that heat was not a caloric fluid but a mode of motion, it was forced to proceed in a different fashion. Count Rumford, in 1798, produced friction by boring a cannon in a box containing water and discovered that cold water could thus be raised to the boiling point, which suggested that heat came from motion. Then Sir Humphry Davy made this theory more conclusive by producing heat from ice by means of friction. The climax of the theory was reached still later when Joule made the experiment a matter of measurement by showing that the amount of energy which went into the operation was equaled by the amount of heat which came out. The theory was then regarded as demonstrated, altho it would be a bold scientist who would say that we have the last word on the subject of heat, since the future may produce a conception which will render the kinetic theory as obsolete as the old caloric one. The theorem of the triangle is in no such condition as the theory of heat.

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Three Kinds of Space

The validity of classic mathematics as founded by Pythagoras and Euclid is not impugned by the discovery or development of other systems, usually spoken of as non-Euclidean and non-Pythagorean. Such systems of geometry have been developed by Riemann and Lobachevsky, who have assumed new axioms and arrived at new theorems. The same may be said of the non-Pythagorean algebra of Hamilton and Boole, who have made self-consistent systems out of paradoxical assumptions. But these paradoxical and perplexing systems do not run counter to but parallel with classic mathematics, as an airplane flies along above the tracks over which the train moves more laboriously. In attempting to come to an understanding with these novel systems, the lay mind may well indulge in two forms of reflection, one empirical, the other rationalistic. On the empirical side, where common sense refuses to depart from its habitual notions, the lay mind may protest that these new systems of mathematics do not apply to the world of our experience but depart most abruptly from the laws of existence. They are meant obviously for those who insist upon taking an extremely unearthly point of view. If one holds to such paradoxes, one must abandon experience when he thinks.

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But this, which seems like a defeat for the common-sense mind, may be accepted as a victory for the rationalistic one, since it strengthens the *a priori* notion that truth abides in a vast and supernal realm whose lights are seen by mortals as mere shadows. The lay mind, which despairs of attaining to such superiority of thought, may admire what it cannot itself work out, in the way that the lay mind in esthetics may enjoy taste for the superior work of art which the genius has created. Look upon these Ricmanns and Lobachevskis as only Angelos and Shakespeares, and they will but enhance our faith in the supremacy of the creative spirit in mankind. We do not belong in their class, but they are members of our general order of mankind, and while they defy our common sense and defeat our common calculations, the very distortions in which they indulge tend to thrill the mind by their performances. Daring indeed was Pythagoras when he deduced immortal consequences from the humble work of the Egyptian rope-stretchers, but far more daring is the enterprise of these super-mathematicians in comparison with whose transcendental flights the work of common mortals is as insignificant as that of rope-stretchers from the Nile.

If mathematics has convinced us of the *a priori*, and that all too thoroughly, will the same independence of experience carry over un-

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tainted into the more concrete realm of mechanics? Can things as well as thoughts be regarded as *a priori*? The triumphant principle rules over equations, but may not be as mighty over laws. The question resolves itself into one of geometry. The ease with which the mind adapts itself to geometry has just been shown in the way the followers of Pythagoras set up their omniscient axioms and drew their infallible deductions. Does nature geometrize in the same way and does inert matter justify its occupancy of space by realizing the exquisite forms of extension? If this or something like it is not the case, it is difficult to understand how Pythagoras could have gone from triangles of rope to the pure triangularity of the mind and then returned to apply his theorem to matter generally. Now, it is in just this geometrical manner that science sees the skies, and as ancient mythology traced among the stars the shapes of unearthly demons, modern mathematics draws the pure lines of geometry. And it is upon the assumption of the *a priori* in the celestial order that astronomy has scored its victories and made its triumphant predictions.

The Romance of Rationalism

The most popular example of such deductive reasoning about matter appears in the discovery of the planet Neptune, which might be called

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"The Romance of Rationalism." When, in 1781, Sir William Herschel discovered the planet Uranus moving about the solar system, it was determined that its orbit was not such as it should be in connection with the gravitational force of the sun and the other planets then known. The general assumption was then made that some other and unknown planet must be drawing Uranus from its proper path. In 1843, the orbit of Uranus was calculated more closely in order to discover the position of the planet which was drawing Uranus out of its celestial course. This position was determined, and the unknown planet would have been found if the astronomer had looked for it. When, in 1864, the calculations were made again and the observation added to them, the planet Neptune was discovered in almost the place the mathematician had marked upon his paper. Here is an instance of pure deduction availing itself of the *a priori* to leap up out of the order of space and time and fall back again upon its feet.

The discovery of missing chemical elements by means of theoretical calculation affords an additional example of the way the *a priori* has its place in the laboratory alongside of the test-tube. After Mendelieff had arranged the known elements in a table which seemed suitable to the theoretical ideals of a scientist, he discovered that his arrangement suffered here and there

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from gaps which the known elements could not fill. Pure theory had places for them and had furnished them with the physical and chemical properties which they would possess when brought to light. In the course of time, empirical investigations revealed most of these dreamed-of things, altho two of them are still to be found. Now, if matter were not as mathematical as mind, and if nature herself were not infused with the *a priori*, such triumphs of deduction would be impossible; the very thought of them would seem like the wild dreams of astrologer and alchemist.

But planets and chemical elements are only special things in the whole universe, so that it remains to be considered whether general principles which obtain there are of the same mathematical character and amenable to the *a priori* reasoning of pure mathematics. The most universal principle of the universe is that of gravitation, altho it must be said that at the present time, with the new relationship between gravity and magnetism, we are not in a position to speak so confidently of Newton's principle. Nevertheless, we are in possession of a principle which is universal in its scope, imperative in its action and instantaneous in its behavior. We observe its influence when we see a falling body and feel it when we move about; but this is not to reason about it. To think of gravitation after

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its own manner, is to reason that it operates directly as to mass but inversely as the square of the objects mutually attracted. Now it is this formula—something far different from that of the twice-two-four one—which makes us wonder if gravitation is as necessary in its form as it is universal in its scope. Might it not have operated directly as the distance or may there not be sections of the remoter universe where our gravitation operates according to another formula, as an alien land which uses a foreign language?

This is a question which the physicist must answer in his own way. All that philosophy can do is to suggest that in the formula of gravitation we have the example of a general principle, or that of "attenuation by diffusion," whereby a force of almost any sort needs to diminish when it covers a greater area. Within a narrow circle about a flame, the illumination is intense; but it grows less so the broader the circle. Within the immediate range of a bell, the sound is loud but grows fainter the farther its waves extend. Hence the theorizing intellect, which is no master of mathematical mechanics, would suggest, however timidly, that the operations of gravitation are such as to gratify the expectations of the mind and follow such a course of rationality as to be spoken of as having

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the same *a priori* character of pure mathematics.

Mathematics and mechanics in their stolid, cosmic character might well be expected to evince sheer rationality, since it is only by being orderly that the mathematical can hold and the mechanical operate. When, however, the issue is that of the logical and ethical, which bear the distinct stamp of man's mind and will, the case of rationalism may be lost. Like mathematics, logic is pure and formal, and the neater its forms, the farther removed is it from the rugged nature of the real. Like mechanics, ethics is energistic and somewhat empirical, but its dependence upon the human will makes it far less stable and reliable as a way of thinking.

Logical Intuition

The quest of the universal and necessary in logic is immediately rewarded, altho the results are likely to be hollow and in vain. The very basis of formal logic is The Principle of Identity, which signifies that "Whatever is, is," or that A is A. There can be no doubt as to the universal and necessary validity of this first principle, altho there may be practical scruples against its utility. But, in defense of such formalism, philosophy is swift to state that Identity is of value in a protective and prohibitive way, since it keeps us from identifying

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things that are so different as to have their natures contradict each other. With the validity of the principle beyond all possible dispute, we may consider the value which it has for correct thinking. The principle, or law of thought, may be invoked and applied to those who would assert that "God is nature," "Mind is matter," "Morality is sociality," or who would reason in such a way as to produce such interesting confusions.

Undoubtedly there are difficulties in the way of this self-evident principle of thought, and these are encountered not only in concrete science, which tends to embarrass the mind with the riches of its results, but in abstract logic, which desires to pass onward from identical concepts to judgments which seem to connect if not identify things that are different. The things which we come to know have a way of gliding into each other without much regard for the wall which identity would set up between them. This is true especially when one considers his subject-matter under the auspices of evolution, which is famous for the way in which it makes diverse realms overlap to such a degree that the individual identities are lost to view. But in spite of this conjunctive tendency among the objects of our knowledge, they have still a way of emphasizing at the core of their being the identity which is lost to view on the edges, so

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that we can still distinguish animal from plant and man from ape. The Principle of Identity is like a monarch who maintains his throne but who does not have his subjects under perfect control.

Moral Certainty

When the moral nature of man comes in for a hearing before the supreme court of the *a priori*, the case does not seem so clear. For now it is man, detached from the mechanical order, independent in part from animal instinct, and meandering about under the influence of a will which is free to move but not so perfect as to rejoice in the realization of rationality. The maddest meteor, the rankest weed, or the wildest beast in its own way exhibits more downright rationality than man at his best state of culture and civilization. It is true that man is in possession of reason, but the application of this superb principle, as he makes it, is more scientific than humanistic; for man tends ever to direct it outward toward the comprehension of other things rather than to turn it inward for the cultivation of his own spirit. May we hope, then, to observe with satisfaction the display on the part of our own species of that *a priori* principle or rationality which has been found in the processes of nature and the forms of thought?

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The answer to this critical question may be found in the statement that, at the bottom of man's moral nature, there is a solidity in which the ethical *a priori* may be discovered. This appears in the form of an implicit judgment; or inward persuasion of the Good. No matter what man may do or how he may feel, he judges immediately that the good is better than the bad, just as he decides by a sort of intuition that happiness is preferable to misery. We can scarcely believe that the human race set forth in a spirit of neutrality—as to goodness and happiness—and then applied the principle of trial-and-error to determine which was the better course to follow. Still less can we think that the race divided into two groups, the one to try the happy good, the other the miserable bad, as Abraham followed his right hand toward Canaan while Lot chose the sinister path toward Sodom. No; for unless we assume an immediate principle and an intrinsic standard, we shall have in the future no way of discriminating between the desirable and undesirable.

If we have trouble in believing that man's fantastic will lays down fundamental principles of morality, it is because we consider man in the heat of action instead of the coolness of his intellectual nature. His mood may be such as to engender a diabolism, whence he will say, "Evil, be thou my good." His decadent tem-

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perament, when it lays hold upon him, may incline him esthetically to exalt misery and morbidness above happiness and health. But these frames of mind, more emotional than intellectual, still recognize the ideal of perfection from which they are departing. They represent man as saying, "For the good that I would I do not, but the evil which I would not, that I do." Or, as Pagan wisdom expressed it, "I see the better way and approve of it, but 'tis the worse I follow." We have no need of being convinced that man, selfish, sensuous, and warlike, tends to follow the way of the worse; but even this implies an instinctive recognition of the better. It points backwards pathetically to the good that was seen and approved, and encourages reason to assert, or postulate, an immediate good as a permanent possession of the mind, as a sort of ethical *a priori*.

The Self-Evident in Politics and Theology

When we continue the thin path of pure rationality, and thus pass from the moral to the political, it is still possible to believe that civilization involves a suggestion of the *a priori*, which is seen so clearly in mathematics and logic, even when the beginnings of such political activity, as St. Augustine pointed out, witness a connection between city-building and fratricide. For after Cain had slain Abel, he built

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the city of Enoch, as Romulus killed Remus and then founded the city of Rome. If we may reduce the whole of the political arrangement to a principle of rights, we can then understand how the monarchical mind asserts the divine right of kings, altho a radical might suggest that the royal right is divine only in the sense that it is not earthly and human. If we take the standpoint of democracy, we see in Magna Carta, Bills of Rights, and Declarations of Independence a direct appeal to some immediate principle so persuasive as to forbid any sort of induction from particular cases or deductions from higher principles. This appears with much emphasis, but perhaps not with as much thought, in our American document, which so relies upon the political *a priori* as to say, "We hold it to be self-evident that God hath created all men free and equal." This may be taken as a sort of Jeffersonian gesture or revolutionary fling on the part of our forefathers generally, but the mood which dictated their Declaration was one which had been brewing in the brain ever since, in 1625, Grotius blundered upon the rights of war and peace and called it a deduction.

Now, if there is such a thing as a political *a priori*, it is just as possible that there is a theological one, since the idea of God should be as fundamental as that of man. Theology, in

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calling upon reason to substantiate its instinctive belief in the Deepest and Highest, has elaborated a series of theistic demonstrations which lead back, at last, to the thought that the being of God, as Anselm of Canterbury insisted, is found in the very idea of Deity. Plato had taught him that ideals are reals, hence he concluded that the highest ideal is the most real of all. Furthermore, since the idea of God cannot be proved conclusively from anything in rugged nature or even in the smoother universe of philosophy and science, it will have to be demonstrated by itself and take its place among—or perhaps beneath—these other *a priori*s as the most *a priori* of them all. With all of them, as they emerge from below, almost volcanically, into the human mind, the tendency of man is to accept them as he accepts things generally, despairing of any further demonstration. For when man makes the descent into the depths of his own spirit, and comes upon such things as Identity, Gravitation, Goodness, Rights, and Godhead, he can only conclude that, as far as he is concerned, he has struck the self-evident, intuitive *a priori*. There he rests the case of rationalism.

THE METHOD OF EMPIRICISM

The term, "Empiricism," conveys most of the meaning which philosophy finds in it, but does

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not suggest the structure or provoke the problems which such a way of thinking is bound to engender in time. Since we live empirically, with sense as our atmosphere and experience as our guide, we are in immediate touch with a kind of rough-and-ready empiricism, which guides us when calculations miss fire and theories come awry. Indeed, we are like amphibious beasts which have ventured out upon the dry land of the *a priori*, but which are glad ever and anon to return to the original habitat of water, there to be supported and enveloped by a medium to whose soft manner we feel born. Reason is a sort of firmament above, whence we take our reckonings now and then, but experience is the mundane sphere in which we live, act, and try to reason. We are of the earth earthy and empirical.

Experience as Teacher

When, however, we attempt to construct a logical organum out of what is so agreeable to sheer life and action, we find that the thick world of experienced facts is not as illuminating as the dim and distant world of thoughts; for in its opaqueness, the world of experience makes a poor mirror for the mind. If, then, it is thinking which engages us and knowledge which leads us on, we must inquire to what extent, or with what degree of certainty, this pillar

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of cloud by day can afford a guide comparable with the pillar of fire by night. Even life itself, when we try to render its moral, political and social aspects clear and convincing, may require us to amend our human experience; but all the more likely is it that the more rigorous process of thought will find us attempting some leap or flight in the direction of ideas when we seek a view of man and nature as wholes or philosophical universals. Now, just what does "Empiricism" really mean, or how are we to understand our human experience as such?

The preliminary attempt to define or even describe empiricism will reveal a paradox acceptable to the philosophic mind but disconcerting to those who are not adept at dialectics. It is that we date the conceptions of our own experience, not from experience itself, but from the opposite or rationalistic point of view; just as the Copernican astronomer determines the position of the earth in the skies by assuming the remote standpoint of a star, the sun. Like the artist, we see the landscape better when we turn the head upside down and look at the world through our legs; or like the traveler, we understand our own country for the first time when we see it from abroad. When this practical paradox of the reversed view is applied directly to the examination of empiricism, it will appear that the empiricist spends most of his time and effort

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protesting against and passing criticism upon the extraordinary views so gaily assumed by his friendly enemy, the rationalist. Now, as a critic who curbs the spirit of pure speculation, the empiricist has shown his right to exist. As a faithful hound which dogs our steps and makes us aware of something out of the way, he has long since demonstrated his value as a companion for venturesome speculation.

If philosophy had followed the staid course of common sense, it would have witnessed man setting his own house in order before attempting anything of wider range and more ambitious character. But philosophic thinking is ever an extraordinary procedure on the part of the mind, so that its history shows a thoroughly developed rationalism before any empiricism was dreamed of. It is true that, among the ancients who were charmed with Ideas, one finds a Democritus setting up a world of physical atoms in contrast with Plato's world of spiritual entities; but both of these orders, however different in themselves, were equally distant from a world of experience. Epicurus, too, as tho weary of dialectics, sought to exalt matter as the supreme principle; but he lacked the physical and psychological paraphernalia necessary to place materiality upon a sound basis. There was science in those days, since Pythagoras made calculations and Archimedes performed experi-

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ments; but the empirical conception of things generally was still to emerge from the consciousness of mankind.

The Two Bacons

Dare we look to the Schoolmen for the foundation of empiricism when they were dominated by the dialectics of Paganism and the dogmas of Christianity? Probably not, and yet the great cathedral builders must have felt that the brain could produce something more than quiddities, and that theoretical plans could find due exemplification in material forms. Before the end of the scholastic period was reached or the beginning of the modern one found, Roger Bacon, *Doctor Mirabilis*, had devoted his life to scientific investigations whereby he was enabled to enrich the growing knowledge of the natural order. Hence, if one were to weigh the importance of the medieval Bacon with that of the modern one, the balance would needs fall into the thirteenth rather than into the seventeenth century, for the scholastic thinker wrote down in ancient Latin what the modern one discussed in such eloquent English. However, it is the modern period, inaugurated by definite discoveries, which is the empirical one par excellence. It is here, too, that empiricism, which is of democratic cast, was made practical by the new art of printing.

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Francis Bacon, who enjoys such a gorgeous reputation for modernness, may be credited with empirical philosophy but hardly with empirical science. His spirit was essentially that of the Renaissance, since it celebrated the return to nature more than it conducted any researches into its special fields. The pathetic lack of stolid modernness appears in Bacon's rejection of Copernican astronomy, his refusal to apply mathematics to physical problems, the necessity of which had been appreciated by Roger Bacon, as also his blindness to the possibilities of Natural Rights and Natural Religion, which were so influential from his day on to the end of the eighteenth century. Bacon wrote essays which reveal remarkable insight into human nature, but was quite perplexed when it came to the problem of bubbles. Hence, we can best do justice to him by saying that he advertised the scientific commodities which he himself was unable to produce. Doubtless he stimulated research, but were he alive to-day he would feel less at home in the scientific order which he seemed to initiate than in the scholastic one which he impugned.

But Science Came Down From the Skies

The empirical era of the factual and practical was not as swift to appear as Bacon and his followers might have wished. This was not due

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to any lack of exact knowledge which an empiricist might reflect upon, since the concrete period of human thought was now well under way. The new heavens had appeared, for Tycho Brahe had placed the sun at the center of the planetary system, altho he was not ready to displace the earth from its strategic position. Copernicus had gone farther, for he had made the earth but one planet among others and had adopted the apparently absurd idea that the earth was in motion. The great astronomic revolution had thus been accomplished, altho the result was hardly of an empirical character. It remained for Kepler to determine the form of the planetary orbits and to discover the laws of their motion. Galileo carried out the propaganda of the new system, but he did more than that. He laid down the principles of motion and made our modern science possible. Now the empirical part of all this is to be found in Galileo's telescope and inclined plane. He looked up into the heavens and saw the satellites of Jupiter, and with his inclined plane brought modern science down from heaven to earth, as Bergson expresses it.

But all of this, so important for the founding of empirical science, has to do with the physical order. The relation of man to his new world was another matter, and one which had to be taken up psychologically by the orthodox empiricists

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of the modern period. How blind they were to physical truths and how all too keen to psychological ones! For the writings of Locke, Berkeley and Hume are fully decorated with such psychological terms as sensation, impression, idea, reflection, memory, and the like, but not in any wise marked by the terminology of physics. Indeed, it was because of their devotion to the immediate experience of sensation that these naïve empiricists shut themselves off from any sort of intellectual relationship with matter and motion, whose qualities were such as to keep outside the narrow range of such psychological experience. If, then, philosophy did not have a standardized rationalism to give shape to the contrast, the empirical side of the debate would lack color if not body.

Locke's Empirical Essay

But the empirical habit of being more contra-reason than pro-experience makes it possible for philosophy to round out a suitable doctrine which may be called the empirical one. In most instances, as will appear at once, the leading ideas of the empiricist are privative and protesting, and the exponent of the theory seems like a fowler who would cage the eagle and release a more domestic bird. The first step taken was to cleanse the mind of what Locke called "innate ideas," which would have a truer ring of logic

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about them if they were styled *a priori*. In this biological spirit, Locke protested that an examination of pure, undisciplined mind, as this appears in child, idiot and savage, fails to reveal the presence of that which plays its part in mathematics and mechanics, or in philosophy and science generally. In defense of Locke, it may be said that he allowed himself to be misled by the *Meditations* of Descartes, who did indulge psychology quite freely when he sought the real objects of his belief, but who regained his balance when he developed mathematical and mechanical considerations.

The privative psychology of Locke convinced him that there was nothing in the intellect which was not first in sense, so that it is to sensation one must look for the origin of human ideas. Once the mind is stocked with impressions from the senses, it may reflect upon these and elaborate general notions which will compare, in a way, with the universals of rationalism. Space and time as such come from the sensation of place and period; finite and infinite from the general sense of quantity. Substance then amounts to nothing more than an aggregate of simple impressions, causality to a more complete relation of little connections which we perceived between things. Universals themselves are but names for large and loose ideas which the mind

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itself formulates from its own sensational acquisitions.

There is, however, far more to the logic of empiricism than this reference to the work of the original empiricist would imply. The rationalist knows this full well and has no desire himself to develop a theoretical doctrine which shall bear likeness to nothing in earth beneath or heaven above. This is the reason why we find him seeking the warm universals of mechanics and morals, and looking for them, however wistfully, even in politics and theology, rather than to confine them to the symbolic forms of the mathematical and logical. What the rationalist seeks in experience is content, the embodying exemplification of his ideas, the enhancement of his universals, which he would find in things themselves and not in the thoughts of the mind only. It was in full view of this concrete need that Kant declared, "Thoughts without contents are empty," just as it was a craving for content that urged him on in quest of the mental desiderata he was forever proclaiming, or "synthetic judgments."

How Experience Provokes

When the rationalist in all his apparent un-earthliness keeps harping on the *a priori*, he is not blind to the fact that it is experience which ever presents the situation in which, as gold in

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the ore, the previous *a priori* is found. Nor is he oblivious of the further fact that, like the "rope-stretchers" of Pythagoras or the bath of Archimedes, or even the mythical apple of Newton, a touch of experience is necessary to bring forth the *a priori* principle. The rationalist sees, likewise, that some of his great deductive triumphs were achieved, not by the commanding officers in the field, but by the common soldiers of the empirical order. In the classic case of the discovery of Neptune, the mathematical astronomer had already at his command a rich fund of empirical data, and even after his calculations had been made so cogently as to work out coherently, he aspired actually to see the result with his eyes. In the parallel instance of Mendelieff's Periodic Law, it was not merely a systematic arrangement of the elements then known, but the discovery of missing ones, which constituted the result, if not the purpose, of the calculation. And thus is rationalistic wisdom justified of its empirical children.

Experience may be called the termini of knowledge, since it is with the empirical that knowledge has its source and end. Between these two there is a lofty loop which must satisfy the rationalist's desire for flight into the empyrean of the *a priori*. The naturalistic source of a rationalistic idea is not a logical but an anthropological situation and a pathetic reminder that

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man is but a finite creature who, altho "something akin to the sea and the sky, is a creature of earth after all." But the science of geometry is not balked by the reminder that man's perception of space began crudely with eye and hand. Astronomy and chemistry are not tainted because of their respective origins in astrology and alchemy. Religion is not less admirable and binding because of the suggestion that it may have arisen from animal dread. Still less is the whole matter of thinking rendered relative by the theory that, in the experience of mankind, thought has been the mere servant of action. For the psychological source of an idea, however interesting, does not contain its ground or the empirical course of a notion lead to a logical conclusion. The mind must creep before it walks, but once upon its feet it strides about in such a way as to obliterate the memory of earlier efforts. Knowledge may remain for a long time in an embryonic condition, but at last it breaks its shell and moves about independently in the world which produced it.

Applied Experience

The application, or more general relationship, to the rich order of reality, which rational knowledge ever feels, is a more impressive argument for empiricism than anything about its circumstantial source in sense can begin to sug-

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gest. Here experience bulks large. For here we find the extensive and elaborate field of science which makes up our known world. The record of this is simply encyclopedic, and when rationalism takes hold of it, the intellectual operations of pure reason resemble the work of surveyors who scan what they do not fully grasp and place thin chains around a vast and fruitful field which they themselves do not possess. When the philosopher recalls the work of his Platos and Kants, it must seem to him as tho, in his ardor for the *a priori*, he has been trying to cook the hare before catching it. Or the simple net which he dropped into the sea has brought up all manner of fishes, so that the net might seem to break. He may discourse most learnedly, as some Plato in his academy or an Aristotle walking about, arms folded, with his disciples; he may lecture so formally, as a Kant or Hegel at the *Universität*; but the kind of knowledge which is to engage the mind and encompass the world springs in luxuriant wildness outside the walled gardens of these somber speculators. Ideals, syllogisms, categories, absolutes and the like are lost to view in a real and knowable world where the laws of the mind are all the more the laws of things and where the natural syllogisms rush from the intellect to seek wider, richer fields in the logic of reality.

The nature of the experience which makes

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the *a priori* appear so pale by contrast includes both the concrete and the useful. It can be perceived and laid hold of. It may puzzle the pure intellect, but it permits the senses and the will to read nature like a book. Truth need not be surmised in idealistic dreams, or thought out to theoretical conclusions: it can be found as a continent which looms up after a long voyage of discovery. Pure theory may have gone on before and reported its discovery of the new land, but it seems as tho the little ships of rationalism had done no more than discover little isles of being, lying off the long coasts of the real continent of truth. How absurd seems the procedure of the rationalist when, as logician, he assumes the universal mortality of man, and then concludes the mortality of Socrates long after history has recorded the actual death of the man who originally made such reasoning possible! And how much more forceful and fruitful to observe a definite fact, advance a plausible hypothesis, and then with an array of similar facts perfect a theory! Now, this is just the spirit of enlightened empiricism, which prefers description to definition and concrete cognition to abstract reasoning.

The Use of Experience

On the practical, or volitional, side of its procedure, empiricism further endears itself to the

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modern mind by returning from the natural order, into which it had advanced so robustly, laden with practical results, as the twelve spies, whom Moses sent over into the Promised Land in the time of the first ripe grapes, came back with a cluster so huge that they bore it between two upon a staff. The practical yield of scientific empiricism is such as to beguile the brain away from the fruitless deductions of metaphysics, since here, in the domain of applied science, are appreciable results of apprehended facts, and these seem to create a new heaven and a new earth of those industrial appliances which minister to the every comfort and convenience of mankind. Philosophy, which cannot bake bread, is outdone by science, which creates mechanisms to satisfy our every earthly need in ways which are so fully felt and habitually expected that no detailed description of them is possible.

But the course of empiricism, all marked by its triumphs in the realm of the particular and practical, has been as heedless in its methods as it was happy in its results. The empiricist may be likened to a plunger in the stock market, who piles up profits only as he borrows for his buyings, and who at last must submit to an accounting, which may show that he is not so rich after all. There can be little doubt that empiricism has been a huge borrower from rationalism and, sooner or later, must acknowledge its

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indebtedness. When this accounting is made, it will appear that empiricism is not wholly empirical, if it may be put that way, but is a doctrine whose basic principles, general forms, and final conclusions are of a rationalistic character. The way for modern experience had been prepared, its course marked out, and the general cast of its conclusions anticipated by a theory of knowledge which it ever sought to set aside. It might seem as tho the rich harvest of the concrete and useful had dropped as ripe fruit from the Tree of Knowledge into the empty baskets of the modern fruit gatherers; but a little reflection will show that knowledge, far from being a windfall, is something which has been brought about by long cultivation; for rationalism has labored and empiricism has entered into the fruit of its labors. An examination of the elements which form experience and the factors which control it will reveal its quasi-rational character.

Experience Is Human

First of all, it must be said that experience is something enjoyed by man. As long as we dwell upon the sensuous nature of the empirical and dilate upon its practical applications, we shall be inclined to look upon human experience as a mental arrangement which man shares with the higher animals. In them we find the perception

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of the particular; in them the instinctive application of what is thus sensed. In the brain of man and beast alike, while they are struggling for existence, we find a direct application to the salient qualities of things as far as these are able to satisfy physical wants. We find, further, in both alike a primitive tendency to use the objects of perception as means to a practical end; the web of the spider and the beaver's dam here, the tools and weapons of the savage there, are examples of practical mentality, which, however, is innocent of thought and experience alike. The animal has its habits, the primitive and even practical mind of to-day has its lore; but habit and lore are far removed from that definitely organized and distinctly intellectualized thing which we have learned to recognize as human experience. For out of this comes a science which is strikingly absent in mere human cognition, as it is not to be thought of in connection with the animal mind. It is this scientific experience with which philosophy has to do.

The rational character of experience will appear further when it is pointed out that the empirical way of regarding the world is exemplified by the trained human mind. When the human mind in its raw condition sets up relations with nature, it may acquire certain useful forms of observation, a practical rule of action and a set of traditional judgments about things

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generally; but this wisdom of the world, however adroit in its procedure and admirable in its form, is not to be taken as the kind of experience which science employs in its investigations, any more than it can be accepted as the empirical theory which philosophy introduces into the problem of knowledge. An experienced woodsman can be of great value to a botanist but cannot afford him real aid in his scientific work. A practical worker among men may give suggestions to the social thinker but must step back when the latter really goes to work. For experience is not something which man in his lowest mental state may have for the asking; it is an intellectual benefit which only man at his best is able to appreciate.

What Are the Facts?

The humanistic and intellectual character of experience appears the moment we consider it in the light of Observation. The act of observation which lights upon the fact might seem to involve no more than the mere presence of somebody's mind in the region of the desired datum; but we know perfectly well that scientific data are not discovered in the way that a number of people of all sorts look for a needed object or some missing thing. Observation, in the scientific sense of that term, involves the right sort of person looking for the right sort of thing. The

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astronomer, thoroughly trained in the ways of the skies and fully equipped in his observatory, sees the star which is hidden from mortal gaze. The botanist who has come to an understanding with the flora of the region discerns the plant which the layman treads under foot. When it is a question of relations between things, the physicist finds heat in friction in a way that escaped the observation of the savage even when he knew how to produce fire by rubbing two sticks together. "Facts," which seem such obvious things, are really data which are not as prominent as common sense imagines. A thousand and one things may pass before the eyes before the one which is new and significant is discovered.

Observation is not obvious. On the side of the object, it must be realized that nature is not *outlining her laws the way courses are stated in a college curriculum*; nor does she set forth her scientific goods as tho it were her aim to advertise. Nature may not love to hide, but she has in mind, if one may so speak, gigantic transactions, so that she cannot take time to explain her methods to the human mind. Colors, odors, and flavors are qualities which nature impresses upon consciousness, but these attributes of things give us little idea of their nature. The pleasant and unpleasant effects which objects have upon us, so that we entertain desire or aversion for them, are still other impressions which common

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nature impresses upon the common mind; but we cannot make headway in science by listing our human desiderata. Indeed, when science began to take shape, it was found expedient to take all such salient qualities of things perceived, as Galileo did, and set them aside in the rather ignominious realm of the "secondary qualities." Unfortunately for common observation, these secondary qualities are forever standing in the light of the "primary" ones.

The inherent difficulty of observing the data out of which experience is to be fashioned is accompanied by perceptual looseness on the part of the would-be observer. Practical realism would say, "Paint what you see, record what you observe, say what you think." But in the confusion of the landscape, in the panorama of the world and the stream of consciousness, just what does one see or observe or think? If there is to be observation which counts, the mind must be sharpened to the proper point, so that it knows what it is looking for; and this must be some sort of rationalistic purpose, or guiding notion. It is only the geologist who really sees the stone or the astronomer the star or the botanist the plant. The rest of us do but gaze blindly upon the thing in question as one among others in the whole display. This might seem to exalt unduly the rationalist's principle of deducing the particular from the general, but it means

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only that the deductive state of mind is all but necessary in fixing attention upon what is to be a fact, a datum, a point in the interpretation of nature. Thus it is reported of Charles Darwin, who might be esteemed a pure observer of plants and animals, "that he often said that no one could be a good observer unless he was an active theorizer."

The rationalist who defines his topics in an abstract manner is much more at ease than the empiricist who describes his data in a realistic way. For the shut-in mind of the *a priori* thinker does not encounter the confusions in nature and consciousness which tend to distort pure observation. To meet this difficulty the empirical thinker resorts to the semi-abstractionism of experiment, wherein a portion of nature is isolated and the process of thinking narrowed so that crucial cases can be created and distinct observation made. Experiment, moreover, leads to measurement; and what is science when it cannot state its case according to the metric system? Once the empiricist has arrived at the definite observation of the given, he is ready to realize those principles of real observation with which his broad system of philosophy really begins.

What are we to think, then, of the empirical expectations which are supposed to realize themselves when consciousness reaches out with the

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hope of grasping the utter realities of the world? Even the simple act of "getting at the facts" has turned out to be a difficult task of identifying data, so that human experience would seem to be a discipline more severe than speculation and perhaps as scholastic as rationalism itself. Experience when understood and not merely talked about is a complicated matter of connection and coordination, of criticism and arrangement, and even the preliminary effort to isolate its elements, as these punctuate the empirical discourse, has shown how sophisticated the empiricist really is. His is a choice theory, not a crude one; his a conception of knowledge so selective as to be aristocratic in its bearing. It was he, was it not? who promised to deliver us from the dungeon of Scholasticism; but now we realize that we shall by no means come out thence till we have paid the uttermost farthing.

What's the Connection?

The character of our human experience becomes more complicated when we realize that we must pass on from the observed facts to their real relations. We may put them together as they come together or let fancy arrange them in some romantic way, but we shall not get knowledge thereby. No, we must sever the casual connections which appear in every-day life and

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cut asunder the cords with which custom may have connected them. Then, having differentiated them in the conditions where they were found, reassemble them according to a pattern which appeals to reason as suitable and cogent. Now, that which forms the fiber of this tough experience is the principle of causality, and "happy is he who can cognize the causes of things."

The reconstruction of nature according to a rational and recognized principle requires method. If nature were an illuminated cosmos and man possessed a transparent consciousness, the purification of the two would be unnecessary. But nature does not merely pose for the mind, nor does the mind devote itself unreservedly to truth-gathering. Hence the knowledge situation, which empiricism seeks to clear up by means of observation and explanation, comes to be recognized as something different from what one finds in a studio or laboratory. Studio lights and laboratory methods must be arranged in something analogous to the *a priori* system of rationalism. Bacon recommended this, but it remained for John Stuart Mill, more than two centuries later, to regulate empiricism by means of inductive logic. Mill did this by means of Methods, not categories or ideas or syllogisms. His were the Method of Agreement, Method of Difference, and three other methodological

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schemes brought about by combinations and adaptations of these. They were meant to detect nature in the act of causal connection.

The Use of Methods

The Method of Agreement is calculated to grasp the crucial circumstance and draw it out of a confusing mass of phenomena. Of course, nature ever runs true to form, but she carries an elaborate entourage along her causal avenues. Hence, this inductive method is meant to deliver the human mind from irrelevance rather than to cure nature of her prodigality. Doubtless all of nature's phenomena follow some method of agreement, whatever it may be, so that the method in question is meant for man, and is more psychological than physical. An academic illustration of Agreement will serve to set the matter in clear light.

In the case of color, one is inclined to believe that this effect is due, after the manner of pigments, to the nature of the substance which reveals the tints. With mother-of-pearl, it seems as tho the delicate iridescence were caused by the gross nature of the shell. But Sir David Brewster took an impression of this in such alien substances as beeswax and balsam, gum-arabic and lead, only to discover the same sort of coloring. These "colored" substances differed widely in their material make-up, but agreed, as far as

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this particular experiment was concerned, in their form. Hence it was the form which had to be accepted as the cause of color in the case. Any one who has observed something like rainbow effects in petroleum and tar has at least marveled at the phenomena, altho he may not have known how to explain it according to any Method of Agreement.

Experimental investigations of a more valuable nature, as these were made in connection with the phenomenon of heat, have the effect of making the method more impressive. When Count Rumford produced unlimited heat by boring a cannon in cool water, he believed that the heat was due to friction rather than any sort of "caloric" substance. When Sir Humphry Davy procured heat from ice by rubbing cakes of this unpromising material together in a vacuum, the frictional cause of the phenomenon was further corroborated. And when J. P. Joule drew out in the new form of heat the equivalent of the amount of energy he had put into his experiment, the notion that it was not the matter involved but the manner in which it was operated which gave the cause was practically substantiated.

In the human order, which bears but faint analogy to the stolid natural one, this same method of reasoning seems to apply in such a way that we can control causes as far as they are

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involved in the life of individuals and of society. Let any one who suffers from indigestion muse upon his diet, tracing it through its variations from meal to meal and from day to day. If, along with a variety of other foods, his menu shows the consistent use of coffee, he is not slow, altho perhaps reluctant, to conclude, something after the manner of a certain advertisement, that "There's a reason." Coffee is the cause of the indigestional phenomenon in his private laboratory. Doubtless this method of reasoning, even in the elaborate form of The Joint Method of Agreement and Difference, has been used by mankind ever since primitive man discovered the art of fire. But when the method is ensconced in professional empiricism and stated in the broad outline of abstract language, it seems more impressive and appears to illustrate the way in which knowledge becomes power.

The Experiment of Prohibition

In the larger order of congregated individuals, the Method of Agreement, which always conveys the opposite Method of Difference, may be observed in the case of American Prohibition, which President Hoover has styled "a noble experiment." The inductive argument herein is as follows: If we have such a constant institution as the saloon along with all sorts of people, different kinds of occupation, schools of different

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ranks, efficient or inefficient police, vigorous or lax courts, active or inactive churches, censored or uncensored books and plays, Republicans or Democrats in control, and various other phases of a nation's life distributed over the forty-eight states, we conclude that the social disorder with which we are all too familiar is traceable to the one invariable thing mentioned. This is the Method of Agreement under a wet régime.

If, now, we abolish the saloon and still have the same sort of people with their usual occupations, the same schools, police departments, courts, books, plays, parties and the like, and then have social order with none of the poverty, distress and crime of the saloon era, it is reasonable to suppose that the presence of the saloon made for the bad as its absence makes for the good. Naturally, there are difficulties in the way of conducting Mill's Methods on such a gigantic scale, with such a heterogeneous population, and under imperfect conditions. The wet era did not affect all who lived under its auspices; the dry one is similarly ineffective in touching all who are included in it. Yet, there is doubtless a tendency of wetness to mean badness, of dryness to mean goodness, altho a person with no taste for inductive reasoning and seeing with only half an eye might protest that this conclusion might have been drawn deductively from

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the very nature of the case apart from the statistical inductions which are employed by those who want to place such "Matters of Course" upon a philosophical basis.

Where Induction Lags

Furthermore, the popular practical mind, which is mildly interested in inductive canons, may wonder why it is that these methods have not succeeded in locating causes in cases of the most conspicuous of our human ills. There are plenty of instances of crime here and obedience to law there; of cancer and non-cancer; of war and peace. Why, then, do some of the population persist in violence; why do so many suffer from this dread malady; and why do the nations of the earth still make war? Is it that induction cannot succeed in isolating its crucial cases because it hasn't observed long enough or with sufficient care? Is it that the human situation is too unstable to permit logic to apply principles which are so fruitful in the realm of stars and molecules? Or is it rather that the inductive empiricist, in his disdain for deductive reasoning, which often is only glorified common sense, has taken too much upon his shoulders and should allow the claims of pure reasoning to be put forth more fully?

It must appear by this time that the business of getting at the facts and finding the reasons

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is something so serious that experience, which started at a low level of logic, must be elevated still higher if it is to become an acceptable way of thinking. When one confines his reflections to phenomena like color and heat, and even when he lengthens his logic to include such remote topics as earth and sun, he is privileged to feel that he is carrying on an intellectual commerce with an empirical order all his own. But when his quasi-empirical plan is supposed to include a star which ceased to exist hundreds of years ago altho its light is still seen as if it were "there," he may feel that the quality of experience is unduly strained and may long to treat such topic in a less concrete manner. When, further, one tries to "experience" an existent star whose light for all its speed cannot wholly cope with cosmic space and has still to arrive, the tension on the empirical may appear still more intense.

Likewise with the microscopic elements of the physical world which elude the naked eye and finally escape from the magnifying lenses: dare we speak of these molecules and atoms and electrons as objects of experience? May we suggest in defense of our local theory that, had we better eyes and better lenses, we should observe these invisibles? or that the superman of the remote future, with a superscience in keeping with his superiority, will see what is hidden from

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us here and now? On the contrary, the empiricist finds it more convenient to extend his doctrine than to strain the sense-factors which constitute it. Thus he substitutes for the "experienced" the "experientable," and changes from an actual experience to a possible one, which is conceived after the analogy of it. The practical empiric dares not do this, for he cannot navigate when his ship is "out of sight of land." Indeed, he cannot swim when the water is "over his head." This, however, can be done by the scientific empiricist, altho the extension of his program will bring him nearer than ever to the realm of the rationalist.

Now, the size of things is not altogether significant when once we have those things themselves, for we can tell what space is without telling how large it may be. In the case of the ultra-universe, which seems to betray a greater galaxy beyond the one we experience, we can reason by analogy that, after all, this super-celestial order is only a greater range of what we have already experienced. And when we are confronted by the question of the infra-corpuseular order in their mysterious character and behavior, we may conclude similarly that this innermost world is only a continuation downwards of the granular system with which we are better acquainted. Certainly, neither the macroscopic order beyond nor the microscopic

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realm beneath gives any indication of having different qualities from the more usual things which we experience, so that we may speak of galaxies and electrons as being the objects of a possible experience. And even more certain is it that no one, following science upward to excessive heights and downward toward unwonted depths, would expect to come upon God as the largest of all things experienced, or the soul as the finest of all things discerned. No, for God and soul are of a different sort and are not supposed to become the objects of quasi-sensuous apprehension.

Architect and Builder

The field of experience, with its observable facts and assignable relations, is thoroughly legitimate, so that we have a right to reason in the region of the concrete as well as in the domain of the abstract. But the kind of reasoning which the empiricist employs may not be so well authenticated. Master of his content, as he is, he may not be so mighty with form, just as the skilful builder is not necessarily a good architect. Now, it is the architecture of experience which affords no little trouble to him who forever persists in following the half-resisting lines of perceived facts. Empiricism is eminently a theory of the present. It finds that facts are as they are and that relations between things

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which obtain here are just as constant elsewhere. But will the future reveal this admirable constancy of things in which empiricism now rejoices? When such a futuristic question comes up, it is answered simply and sincerely upon the basis of The Uniformity of Nature.

In practical life, we make of The Uniformity of Nature a matter of habit and are inclined to agree with Hume when he said, "Custom, then, is the great guide of human life." Of human life where there are many things to do and not so many to be thought, and where habit is so magisterial, yes, indeed; but this is a philosophical question, and what is philosophy if not a demonstrable affair, a matter of certainty? In the religious life, we are inclined to relegate this question of future consistency on the part of nature to the fidelity of the Divine Being and thus trust that the to-morrows still to come will be in line generally with the dependable yesterdays. But, altho we may have to betake ourselves to faith when it comes to proofs of futures, we have still to see what reasoning can bring forth when this problem of a persistent uniformity among natural processes is turned over to it. And here we find that the temporal character of professional empiricism makes a solution dubious.

Popular empiricism, which breaks away from practise long enough to theorize a bit, will in-

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sist that the proof of a Uniformity competent to cover the far-flung future is found in what has already been experienced. We have mastered the alphabet of nature as far as a, b, c are concerned, and have thus established an alphabetical order of things. It was in accordance with such uniformity that the sun rose, rose, rose, and the same uniformity extended along a straight line will account for future sunrises. For such instances of events as empiricism can enumerate have done more than merely indicate separate happenings; they have revealed a principle upon which they themselves depend. But a little reflection will show that this sort of extended reasoning, by assuming what it is expected to prove, simply begs the question and leaves us where we were, except that our observed facts have shown a likely tendency to uniformity.

The professional empiricism of Mill is no more successful in its attempt at logic than was this practical method of prognosticating uniformity. According to Mill, the futures which once were became so many presents of an empirical sort and are now on record as futures overcome. The same will be true of the futures yet unexperienced, for they, too, will take their place among the acquired or overcome futurities. Yet this way of reasoning, for all its plausibility and optimism, is guilty of reasoning in the same cir-

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cle, since it has to assume upon the very basis of uniformity that future futures will turn out to be like past futures. The principle of Uniformity, sensed generally and applied loosely, allows one to reason securely about particular things in their local connections, but will not permit itself to be proved by any such inductive procedure. When it comes to a question of proof, the empiricist must retire from the field having achieved a moral victory in the form of a high degree of probability.

Man the Master of Experience

It is evident that certainty cannot be squeezed out of experience unless one lay firm hands upon it. One must be its master, not its slave. He must treat it, with all its complicated vastness, as an idea in his mind and have it partake of the deductive qualities which its position there will involve. When the subject of experience was introduced, it was pointed out that the empirical is no ordinary form of reasoning in which the common mind, still less animal instinct, participates; but a way of reasoning superior in character and rigorous in form. This has appeared in the course of the analysis wherein actual experience has had to yield to possible experience, and possibility is something which belongs to the realm of pure thought rather than that of mere experience. From this point

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of view, experience is an ideal still to be realized; a way of thinking which must be defined in a non-empirical way. Man is in the world, works in the world, and speculates about it; but man has not experienced the world and in all probability never will.

As soon as it has been recognized that The Uniformity of Nature is not the subject of any possible experience, it will be appreciated that other forms of the empirical process are just as far removed from the sensuous realm in which they are found. That grasp of the world which both science and philosophy seek to exert is not to be made by soft hands but by more sinewy members, for the rigorous forms of reality, especially as these appear in mechanics, demand strong reception on the part of the mind. There must be necessary preparation for the conquest which knowledge would conduct, and that preliminary can be found in reason only. Or, to drop these figurative modes of expression, the geometrical character of the universe requires geometrical apprehension on the part of the would-be knower.

The very region in which the world is found, or that of time and space, is one which experience may be able to touch and appreciate in a general way; but the comprehension of these temporal and spatial forms is a matter which must be taken up by the deductive intellect.

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If nature were at heart as pictorial as she seems, the empirical way of interpreting her forms would be sufficient. But nature, as we have come to know her, is a severe order, the form of which demands rigor on the part of the knowing mind. Cast in a mathematical mold and carrying on her operations mechanically, the natural order is to be understood only as the mind utilizes suitable methods. Now, these are not the methods of empiricism, for, granting for the sake of avoiding argument, that experience knows the world, it cannot be said that experience knows itself. That knowledge must come from some higher source.

Experience Outdoes Itself

The extra-empirical character of experience is found in thought which is famous for its universal and necessary connections. Will this seem over-idealistic in mood or dogmatic in tone? Will this appear to take nature, after it has been worked over and perfected by science, and deliver it into the hands of that dread dialectics from which it effected its escape? Must we who have luxuriated in glad principles of scientism return to the grim forms of rationalism? As long as the thinker indulges a polemical spirit, just so long will he feel that the rationalistic appropriation of experience is a form of theft, as tho science were the fruitful vineyard which

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was seized by Naboth because it lay near his palace. But when scientific empiricism comes to the sound realization that the problem of the world is too much for mere empiricism, it will welcome the aid which comes to it from philosophy, as a weaker nation opens its gates to the regency of a stronger one.

But the rationalizing of experience need not be carried to the extremes of Transcendentalism, as tho Kant were in the right when he first laid down the principles of pure thought through the logical judgments of the understanding and then made experience fit into the rigid framework of reason. For that makes of reason a Procrustean bed into which the sleeper must be fitted by cutting him down or stretching him out. No, it is rather that reason is the plan which experience is to realize, the trellis on which its vines may grow. It is more appropriate for the mind to rule experience than to obey it; and the pure calculations of the mathematician, the ideal experiments of the physicist and chemist, and the genetic procedure of the biologist are just so many illustrations of the way in which the mind takes hold of its experience with nature to make it heed the behests of thought. Nature is a most material witness, but her testimony cannot become evidence until she has been cross-examined by reason.

The responsibilities of reason must not be over-

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looked in the present situation, where the rational regency over the objects of experience is more like a limited monarchy than a tyranny. These rational obligations may not have been fully realized by Plato, who was inclined to transcend the world of actual moving things all too freely and attempt a return to nature all too fantastically. The place of reason within the world of things was not appreciated by this classic idealist, who was so fond of likening the natural situation of the mind to that of a benighted mortal in a shadowy cave. No, for the mind of man makes its appearance and grows up within the world which gradually becomes an object of clearer and clearer knowledge. Now, whether the mind finds rational entities and necessary relations in the world or frames them itself and then, as it were, forces them upon the world is a question which cannot be taken up appropriately or fruitfully until we come to the discussion of Idealism and Realism. For the time, we may rest in the conviction that knowledge, while not derived from experience, is yet devoted to experience and is knowledge in the genuine sense of the term; that is, the *a priori* of rationalism, which means only that philosophy deals with universals.

II

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AN anti-intellectualistic conception of the world appears at first to involve a logical contradiction and psychological impossibility. We have a general prejudice to the effect that our knowledge comes to us along the straight and narrow way of thinking, hence we cannot place ourselves in a position or get ourselves in a mood where we can appreciate the possibility of a "thoughtless" way of getting at truth. This general presumption in favor of knowing by thinking is made specific and scholastic by the standard theories of knowledge. Rationalism insists upon arriving at truth by a proper procedure, which consists in drawing deductions from general principles. Empiricism may appear to be animated by a more natural method, but it, too, bases its claims upon similar general principles, only it goes at these more slowly and builds them up more painfully. In this manner, both common sense and common logic seem to put blinders upon the eyes so that we can see only straight ahead.

The Departure From Dogmatism

Now, our century attempts to depart from this dogmatism. It entertains a more liberal con-

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ception of the cognitive process and proposes to use "mind" in a fuller, freer way. The consciousness that was consisted of mental units, or the sensations which could be identified, classified and even enumerated in so many thousands and tens of thousands. These might seem to afford sufficient scope for thinking, but the rich array of mental elements could not atone for the fact that living connectives between them were lacking and that the vitality and activity of the mind were practically ignored. The mind has now overflowed the narrow banks which the older psychology built up about it. The field of consciousness has been enriched by observations in the quarters of both the normal and abnormal. Its processes have taken on life by means of the applied psychology which set about using what the science of the nineteenth century had only recorded; hence we have a psychology of most of our human enterprises, as education, religion, business, industry, and the like. A word like "psychology," which is on almost everybody's tongue, has come to mean more than was ever dreamed of in the analytical psychology of the last generation.

In addition to the natural expansion of the conscious field, we have psychological systems which further carry us away from the prim neighborhood of a consciousness which was delineated in such a self-conscious way, by inward

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observation or introspection. The Behaviorist seeks to make our consciousness more effective by treating it as a physical mechanism which runs so well of itself that it doesn't reveal any special sensations or require any supervising consciousness. The Psychoanalyst does something like this when he draws common consciousness into the unconscious and thus imposes upon it his mental mechanism. Where the psychologist does not employ these extreme measures, he departs from the analytical, atomic method of getting at the mind by treating it in the form of patterns. Now, all of these tendencies have drawn philosophy away from the trim and trite conceptions which led to Rationalism and Empiricism, but have invited the less logical conceptions which appear in Mysticism and Pragmatism.

The Revolt Against Reason

The intimate analysis of Mysticism and Pragmatism, which constitute the anti-intellectualistic method of arriving at truth, will reveal specific differences between their aims and results. But such an analytical procedure cannot well be taken up until the spirit which they share has been interpreted. They agree and differ and agree to differ; but what is philosophy when it cannot debate and draw distinctions? In the apparently unusual case of anti-intellectualism,

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we must ask whether the propagandists of Pragmatism and Mysticism have merely taken advantage of some special situation in philosophy, as political radicals avail themselves of popular dissatisfaction or social confusion to advance their revolutionary cause, or whether there is something in human nature itself which puts forth systematically what these novel movements express specifically. Is man intellectual or anti-intellectual in his nature? Has the intellectual development of the race been a sham which our century has revealed, a mask torn off, a theory exploded? Shall man consider the way in which nature has given his brain the capacity for cognition and then allowed the race to build up a system of culture only to say, at last, "Oh, knowledge! I have followed thee, and found thee but a shade"?

In reviewing the intellectual history of the race, it is inescapable and undeniable that man, once he has attained a certain intellectual elevation, tends to repudiate the efforts of his mind and effect a return to something more natural, congenial, and promising. When culture was in its infancy, man may well have felt a certain nostalgia for nature, which, in our age, is not so credible or sincere. For we humans have taken or had thrust upon us an intellectual burden often grievous to be borne, so that we are not to be blamed if, at times, we attempt to

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cast off these fardels and be free. The effect of the intellect upon us is insidious, and when, like Joseph, who was sold as a servant, our feet are laid in fetters, the iron seems to enter the soul.

Thus it is that the untamed spirit of man breaks out and for a while, at least, luxuriates in the natural liberty which, in his allegiance to the intellect, he seemed to have foregone. Again, it is a sense of weariness which overtakes the mind and all but persuades it that its intellectual labor has been a thing forever in vain. Did not the Hebrew mind, not so conspicuously intellectual, distrust the advantages of the intellect to the extent of saying, "Of the making of books there is no end, and much study is a weariness of the flesh"? Or did not the Greeks, whose temper was so finely intuited in Nietzsche's *The Birth of Tragedy*, try, at times, to repudiate Apollo, god of culture and enlightenment, and thus release the barbaric Dionysus with the feeling that his crudeness and violence might be more enlightening and much more agreeable? Aye, even their Socrates, as it were stepson of Apollo and famous for his intellectual insight—did he not at last repudiate any possible interest in speculative matters and resort to a study of good conduct as the most fitting employment of reason?

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Earlier Eruptions

Let Scholasticism embrace the mind with its intellectual forms, even when these are duly softened by religious feeling, and it will find man seeking the more languid logic of some mystical movement, like that of Meister Eckhart and Thomas à Kempis. When modern thought tightens the reins of reason and tends to render man submissive to mind and mechanics, even emancipated minds as Rousseau and Voltaire will rebel and have their heroes, like Emile and Candide, return to nature and seek truth by cultivating the garden. Give us the rigid scientism of the nineteenth century, and even some of the most intelligent minds will feel its staleness and seek something novel and startling, just as the post-Victorian period has turned to syncopation in music, futurism in art, as well as frank innovations in feminine attire. Now, it was when this amiable confusion was fermenting that Mysticism and Pragmatism came into the world of philosophy as the entering into their own kingdom.

But apart from the special turns which the thought of man will take at certain junctures in the history of culture, there are just as definite moods which will contrast themselves in such ways as to indicate that the human spirit when it engages in thought is not fully

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persuaded in its own mind. Man will give himself up to an extended period of contemplation, but the time comes when he seeks relief in conquest. Then, as among the Hindus, the Sankhya of speculation recognizes the Yoga of practise. Then the belief in salvation by an inward faith seeks reenforcement from the cruder conception of salvation by works. When the intellect is strained to an undue pitch in the intellectualism of Thomas Aquinas, man seeks relief in his will and sets up the voluntarism of Duns Scotus. Let chivalry come to a pathetic climax in Don Quixote and the human spirit can welcome the practicality of Sancho Panza. A Hamlet who has been over-intellectualized will come to the tragic realization that he is unfitted for rigorous action, while a Faust surrenders the advantages of a German university for the opportunity to do such a useful thing as drain a swamp. Flaubert saw that romantic reflection was bound to unfit one for practical action in the real world, just as Turgenev tried to make his characters realize that Russian reform could not be brought about by lying on the earth to look at the sky. In our day, Thomas Hardy, his thoughts so fully enmeshed in scientific conceptions, was ready to conclude, as he does in *The Return of the Native*, that thought is a disease whose fever makes one long to escape from the

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coil of things and revert to a sort of Æschylean coolness and calm.

These reversals and moods have in them the essence of that anti-intellectualism which, of late, has been glorified in the form of academic doctrines supposed to be of philosophical import and pedagogical significance. They seem to capitalize the confusion which, at times, descends upon the mind of man when he suspects that he knows too much for his brains and has let his knowledge get away from him. The way in which the modern mind has organized its knowledge in science creates the impression of a vast intellectual corporation whose management is almost too much for even a master mind. If we cannot break up this trust, we can demand that it declare dividends, since science which has made such demands upon our minds must have something for our lives, and the philosophy which has never really led to any palpable conclusion should end in a practical consequence.

Direct Action

Both Mysticism and Pragmatism, as specific expressions of this general mood, agree that knowledge should rejoice in a certain Immediacy. It should suffer us to touch the things of this world and feel contact with the thoughts of the mind, so that we who are in the world and are supposed to be in harmony with our-

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selves may rejoice to feel the mind in sympathetic relations with its various objects. As long as Intellectualism prevails, our knowledge will be offered to us in the form of ideas and delivered into our hands by means of definitions. Hence, it seems, we have a right to demand a quality of experience in which we apprehend things immediately without any annoying inductions. What matters it if we do not "know" in the academic sense of that term? We can experience or intuit things in such ways as to steal a march upon the intellect by getting the gist of things generally. Thus the Immediacy which was lost to view when the period of Analysis set in comes to light again to redeem the time lost in Inference.

There is also in these exploits of the anti-intellectualistic movement a keen appreciation of Activity. Its exponents believe that what cannot be thought out can be wrought out. They will not look for the light, but will work their way toward it. The will shall rouse the intellect from its scholastic slumber and urge it to fashion what it had previously fabricated, to accomplish in a real manner what it formerly achieved in artificial ways. If, as in the case of the Pragmatists, the will is not so fully engaged in exerting itself to see and believe, the results of previous volitions will be examined to see whether their practical results are not fruitful

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consequences. Psychology is showing us, so they seem to reason, that intellect and will are only the opposite sides of an inclusive mental process; hence it will be possible to use the will as both doer and thinker. Perhaps it can force us to the conclusions which the feebler understanding cannot so readily draw, or even make the knowledge which it fails to find. Man has used his head, but now he must employ his hand and "philosophize with a hammer," as Nietzsche expressed it.

The special methods, tendencies, recipes or whatnots exhibited by these amiable radicals might be expected to be cognitive novelties bearing but little analogy to the stubborn principles of the intellectualism from which they would tender their adieus. But, in truth, they seem more like branches which are broken off from the olive and grafted in the grove to partake of the root and fatness of the tree. They appear to yield idealism without ideas; intelligible experience which is not intellectual: "a fringe of vague intuition which surrounds intellectual representation;" a spiritual life which laves harsh thought until it softens; a living acquaintance with objects in place of distinct description; concern about consequences rather than conclusions; humanistic values instead of rational validities, etc. Are the advocates of these views breaking through into new regions or

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merely beating about the well-known bush? Are they like "research professors" who are supposed to make contributions to the established body of knowledge, or merely students who take on extra-curricular activities for which they may or may not receive credit from the academic authorities?

The names of those who are most eminent and influential in this new field are invariably indicative of pure spirits, affable personalities, and authentic culture. In certain cases, their writings betray literary style, which is a rare thing in the library of philosophy. Rudolph Eucken may be recognized as a spiritual personality expressing itself with almost religious fervor. William James, for all his jaunty manner and bantering style, reveals a certain anguish for the truth which he pursued in more than one field of research and reflection. Frederick Schiller upholds a Humanism remotely resembling that of the German poet, albeit in a sweetly diabolical manner. John Dewey, convinced that the democracy can be educated, pursues his Pragmatism as a sort of pedagogical project. Henri Bergson, perhaps the most alluring of them all, yields the most striking contrast between his type of Mysticism and the older intellectualism whose claims he states so justly that his thought finds it difficult to escape its conclusions. As men of genius who work in almost

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complete independence, they agree to distort knowledge for the purpose of discovery. Theirs is the dissonance of speculation which hopes to end in a new type of harmony. Having viewed them as a group, we must consider their claims in the more exact form of philosophical theory.

MYSTICISM

The term, "Mysticism," has been referred to and is now resumed to indicate a theory of knowledge which affirms the immediacy of truth and exerts effort for the purpose of working its way out of intellectualism backward or upward to some sort of living object. In place of this misleading term, we might have used "Intuitionism," but that might have confused a metaphysical method with a moral one. "Immediatism" might have been employed, but it is an unwieldy and artificial word which, further, suggests a kind of empiricism. Hence Mysticism shall have to indicate a way of thinking quite remote from the medieval one, altho the earlier movement did set up a spiritual goal toward which it moved only after a moral and spiritual struggle to which the contemporary "effort of intuition" might be likened. But so different was the situation in the thirteenth century, so distinct its motivation, that we cannot, especially in the case of Bergson, establish any sort of connection between the two movements, which

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do suggest perhaps slight analogy. The advocates of our movement are Eucken and Bergson; one working out of intellectualism by rising above, the other releasing himself by sinking beneath it. If Eucken was correct in his considerations, there is a Spiritual Order, a *Geistesleben*; if Bergson is right, there is a Vital Order, or *Élan Vital*. Certainly, in neither case is there a World of Ideas or a Cosmos of Laws which is to be accepted as the ultimate basis of knowledge or ground of existence.

Latter-Day Mystics

When men, as in the case of those anti-intellectualists, have been schooled in the ways of rationalism and then decide to forsake it, readers of their novel works will be more than likely to watch the way in which they conduct their discussions. If they abandon philosophy and turn to other than reflective occupations, or if they give up the academic life altogether, they will escape any possible charge of inconsistency. But if they follow the same general course along new paths, the question will arise, Are they not guided by the same familiar landmarks? Or perhaps they will seem like travelers who acquire a new tongue, but who are forced to keep translating the foreign phrases into the forms of the mother tongue instead of thinking in an alien language. Of course, both Eucken

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and Bergson persist in using intellectualism as a means of conception and communication, and since that is bound to be the case we may well resist the temptation of suggesting that the anti-intellectualist's attempt to repudiate intellect by means of intellect seems like the effort of Satan to cast out Satan. Now, the main difficulty which these "Vitalists," so to call them, encounter is to find a non-intellectual principle wherein they may rest, since Spiritual Life and Vital Force do not appear to be dependable.

Yet it must be admitted that these strictures which the critic of Mysticism would place upon both their method and object are not wholly just. For, they who are called "anti-intellectualists" are such in name only, since they do not attempt to cast out intellect or themselves abandon its forms; their aim is to place the intellect in its proper place, which is a secondary one. Kant himself did as much for the human understanding as the very worst of rationalists could desire; hence there can be no charge of *lèse majesté* where his Transcendental Logic is concerned. But this same Kant, having exalted intellect to the supreme position of dictator of all existence, proceeded then to reveal something still superior in the moral will with its tremendous Categorical Imperative. Now, if Eucken and Bergson, in making intellect secondary, would make morality primary we should know

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what to do with them; since we know how to handle the distinction between a "What Is" and a "What Should Be." We can call one Idea and the other Ideal, and can spend much valuable time considering whether the free principles of ethics are as good in the interpretation of nature as the firm principles of physics are in legislating for the moral life. But Mysticism does not seem inclined to conduct its arguments in such an old-fashioned way.

Sacrificio dell' Intelletto

It may appear, then, that the intellectual sacrifice is not so great after all. The modern mystic will do no more than attempt the reduction of intellect to something of a more fundamental character. The trunk of the Tree of Knowledge, as it branches out so splendidly above, must be followed down to the roots below into a kind of subintellectual soil if it is to be understood. It will still flourish and its fruits be garnered as of yore, but it will be appreciated that it is secondary to and dependent upon something more basic. Now, this subintellectual principle is easily identified by Bergson in the form of Instinct. In his mind, "Instinct and intelligence are equally elegant solutions of one and the same problem." Eucken was not so naturalistic in his mood, hence he could not be so easily satisfied. He must reduce intellect to something of a more

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worthy character, something spiritual, or that *Geistesleben* of which he loves to speak.

The person who has long been disposed to regard the intellect as final will have some trouble following these mystics down into the subrational realm where they find their starting points. If only they had referred to something tangible, even matter, we should be in better condition to consider their claims. We know, of course, that the intellect does have a way of referring to something other than itself. It makes us aware of non-intellectual objects and gives us reasons why we should accept the principles to which it leads. But we become so engaged with the intellectual process and so enmeshed in its forms that we may forget the thinker who puts forth his thought. The possible situation here is akin to that represented in the nursery rime of the mysterious person who was going to St. Ives and met the man with seven wives, each of whom had seven sacks containing seven cats, each with her seven kits. When one asks, "How many were going to St. Ives?" he begins multiplying by sevens, when it was only the one person who was going along the road where he encountered the various sets of sevens. Now, what is it that considers the objects of its knowledge as things merely encountered, and which further can be enumerated, if one so wills? Or

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what is it that puts knowledge forth as the living tree spreads out its branches?

Life Natural and Spiritual

The latter-day mystics whom we are considering refer us to this prerational realm by pointing behind them. It is "Life" in some form or other which was and ever is the source of that which we recognize more definitely in thought. It has grown up along the tree-trunk of reason to branch out into diverse deductions and sundry inductions, and its fruits we gather in our sciences. What it is in itself, and how we are to grasp its nature, are different matters. Bergson identifies this life with something which we can feel within us and observe significantly in animal instinct, so that we may have to go to the ants to learn wisdom. Eucken was just as thoroughly impressed by the primacy of the vital principle, but was not for a moment disposed to look for it in the natural order. Life for him must be a form of The Spirit, or that subtle and tremendous thing the Germans call *der Geist*. We cannot experience it with the senses; we dare not define it in the vernacular of common knowledge; for Eucken is prejudiced against "Naturalism" and "Intellectualism."

When it comes to a more precise and human conception of this aboriginal Spirit, Eucken avails himself of ethical ideas with the feeling

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that morality in its endless pursuit of the Ideal has kept its skirts clean of that earthliness which appears alike in both the naturalistic and intellectualistic forms of human cogitation. Beneath and behind these he will find a pure and supreme Activity, which he will call the Essential Deed of the Soul. Now, Eucken went as far back as his co-patriot, Fichte, who was famous for the ethical idealism which he had developed by making Kant's moral ideal, the Categorical Imperative, operate in both human life and the natural order. Indeed, if we were to interpret Eucken on the basis of historical philosophy, we should say that he passed from the Self-Activity of Fichte to Plato's World of Ideas without going through nature. Once established upon that dual basis, Eucken's thought proceeds in a manner most esoteric. Its vagueness and subtlety make reasonings of logician and scientist seem unusually simple, for they define their terms and state their cases.

But just as we are about to abandon such mysticism as both meaningless and hopeless, it occurs to us that perhaps we, too, have some hold upon this abysmal principle which the mystic presents in such a provoking manner. Perhaps we have felt it in some uncanny way, or observed its expression by poets and prophets. No matter how shallow we suspect our thought to be, it seems to have issued forth somehow from

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a native sense of truth or appetite for knowledge, if only in the form of a longing. And, then, we feel that we are in possession of a kind of intellectual conscience which may listen to, and perhaps decide upon, the merits of arguments without itself being of an argumentative nature at all. Yes, we feel that we can approve or disapprove of dialectical decisions, just as we feel that we can form a just opinion of the decisions handed down by the Supreme Court.

We might call this non-intellectual way of appraising truths our genius; not that we individually are geniuses in any sense at all, but that we rejoice in the genius of humanity which operates in the realm of the spirit the way instinct moves about so securely in the natural order. We feel, too, that certain representatives of our race, especially men of primitive days, were able to arrive at something like the truth, when their spiritual cunning led them to positions not wholly unlike those which would be taken later when men had developed concepts and deduced laws. Aye, those who "saw life steadily and saw it whole" must have availed themselves of non-intellectual insight, else whence the wisdom, the coherence and plausibility of their fervent utterances?

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Poetic Insight

If we call this "poetic wisdom," we can realize that Æschylus, with his massive views, attained to a conception of things generally before Aristotle perfected his analytical method. We can believe that Dante exercised a vision of spiritual life as true as that of Thomas Aquinas, from whom he derived the more definite notions which he expressed poetically. We may feel that Shakespeare, rich in observation and almost riotous in expression, was as intelligent and instructive as Bacon, who went at nature armed with inductive weapons. Goethe, too, must have seen into the maze of things by means of an energetic vision which, at last, will be found to count as fully as the transcendental logic of Kant. Browning may have been as wise as Darwin; and we, too, for all our lack of talents, may be exercising the insight so significant with the poets, who never dreamed of the Law of Identity or Method of Agreement. Hence, in default of a more adequate way of getting into the depths of the subrational realm of the modern mystic, we will search out the sources of esthetic experience, which may yield truth as well as beauty.

We feel, then, that the idea of poetic insight may bring us into the vicinity of that subintellectual realm whence these new mystics proceed.

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Here, too, may be the original home of that Urge, as we may call it, which laid hold of men in the form of frenzy and allowed or forced them to express sentiments which later crystallized, perhaps, in logical and scientific forms. Now, the most acceptable form which this abysmal consciousness assumes is that of Genius. Its very nature would seem to defy definition, its superiority just as fully to forbid any banal notion of it in the form of psychology or psychiatry. It can be appreciated where it cannot be apprehended, and employed as evidence where it cannot so well be demonstrated as truth. The genius has seen truths, and nothing further can be said. Evidently he has caught the creative spirit of the world, else we are at a loss to comprehend how he fashioned the forms of architecture, sculpture and painting, or how he improvised the modes of poetry and music. He has proceeded instinctively and availed himself of those massive methods of expression which are recognized in the fine arts especially when they are compared with the natural sciences. Has not the work issued forth from something like that utter region in which the philosophical mystic assumes to find, as in a *pre-a-priori* position, the veriest Principle of Identity?

It is quite manifest that the creative work of art was so spontaneous as to rise and develop long before any rationale of beauty was ever pro-

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posed. The Greeks had done their constructive work, they knew not how, before Aristotle attempted a philosophy of art; for poetry always precedes poetics. The art of the Renaissance was finished before inquiring minds felt inquisitive about its forms, and modern art was well established prior to Kant's *Critique of Judgment*. Now, criticism is parallel to intellectualism, while art is aboriginal and independent. As far as we participate in such superior concerns, we may content ourselves with the thought that we possess and exercise Taste, whereby we are informed, as tho by an esthetic conscience, that this is beautiful or fitting or harmonious. We have thus made a sort of descent into the impossible realm of Spirit and have regained our original position so much the wiser for our excursion.

Moral Intuition

Another descent into Spiritual life is promised by the moral nature of man whose level must be as profound as that occupied by the esthetical. When we consider the behavior of man on earth, for better or worse, we must realize that the norms of conduct and standards of worth must have come into being and become operative long before any system of analytical ethics was planned by the reflective mind. Socrates may have discoursed upon virtue, but his Greeks

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were virtuous in a way before he opened his mouth. Plato may have analyzed courage and wisdom, but the Spartans were brave and the Athenians wise before he started his dialogs. Not only do our moral ideals appear ever to anticipate intellectual theories about them, but they have a way of filtering through the forms which we prepare for holding them.

Doubtless we shall never be able to give a good explanation of, still less justification for, these moral precedents; but we can realize that they are there, and that they conduct their affairs in independence of anything that we think about them when we come to the place of analysis. The moral ideal, so to call it, makes the motion which reason seconds and society carries. Itself it makes direct appeal in the form of a special sensitivity, which may be identified as conscience, and may further be recognized in the form of general appropriateness. We consult inclination and consider consequences when we are confronted by a moral crisis; but however we may reason, we still feel a sort of intrinsic rightness about an attitude or act. We think of things, acts, institutions and the like as desirable because of their subsequent utilities, but desirability as such precedes and subtends all these special calculations of the reasoning spirit. Now, in this ultra-natural and ultra-rational realm, we feel that we are not far from

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the mystic depths of the anti-intellectualist; only he is subtle where we fain would be simple, profound where we aspire to be plain.,

The Enormous Dream of Religion

The career and character of Religion appear to be such as to afford us another likely line of descent into the desired domain apparently preempted by the professional mystic. This source of sepulchral or abysmal sentiments, out of which our weird philosophers will evolve the world of our experience, seems unusually promising. Here, in this supremest of sentiments, we have the enormous dreams and gigantic aspirations of the Asiatic mind so indifferent to any calculating and critical ideas which might arise later, as in the western world. Here is a spiritual program which did not end until it had produced, as tho out of air, the staggering notion of Godhead as well as the stupendous idea of the human soul in all its immortality. Here, too, in the bold beliefs of mankind, is a decided touch of the cosmic, inasmuch as faith inclines to the prodigious idea that the natural order, no matter how philosophy and science may handle it, dates back to a situation marked by the extraordinary idea that matter is the creation of spirit. Now, if this doesn't let us descend into the world of Eucken and Bergson, we shall have

to give up the idea of any subrational, subreal realm.

In the case of Bergson, the use of the term "Mysticism" is far less plausible than it was with Eucken, since the French thinker confines his speculations to the natural order, which does not admit of any specifically spiritual message except, perhaps, as we think of Bergson as a modern St. Francis who preaches to or about flowers and birds. His guide was Fabre, the "Homer of the insects," not Fichte, prophet of moral idealism. Nevertheless, Bergson makes use of a subreal, subrational principle, and, like Eucken, seems to have been affected by the nobly preposterous philosophy of Plotinus. With Bergson, however, the aboriginal principle, which serves as a sort of Scholastic *natura naturans*, is somewhere within the range of experience, since it partakes of consciousness, freedom, life, action, creativeness and the like. These we feel; and when we consider them on a large scale, they account for the physical world. If we regard this existential order as a pyrotechnic display, God may be thought of as the living, beaming center whence shoot out the very rockets of reality. Once they are shot out and cool down, we may analyze them as science does when it uses a mathematical method to express the mechanistic form of matter; but if we desire to

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grasp them truly and source-wise, we must avail ourselves of unusual methods.

Bergson's Intuition

This method plenipotentary receives simple expression in the hands of Bergson; when he uses conventional terms he does not fail to invest them with egregious meanings. Apparently, he was impressed most of all by the philosophical possibilities of "experience," but when he uses the idea which that term might convey, it is for the purpose of having us feel our immediate relationship with the Flux of Things, or the flux out of which things come. Hence we verily experience something which is not the object of experience at all, since we feel life, freedom, time, motion and such fluid things in a way which would be impossible in our experience with solid objects. This intra-empirical method, as we might try to call it, yields "intuition," which would be lost in obscurity were it not for the fact that Bergson keeps it in close touch with instinct. If, therefore, we can distinguish the moods in which we come in contact with moving, living things and inert, dead ones, respectively, we can identify his primary method as easily as we can distinguish the spirit from the letter. Our insight will depend more upon attention than upon memory; more upon vigor of will than upon clearness of intellect.

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All of us feel well acquainted with experience, since it is the way we get in touch with things and keep up our active relations with them. Then, in a way, we are somewhat familiar with intuition, for we use it if only in a spatial manner when we observe a part in the light of the whole; or when we realize that a geometrical figure like a triangle appears to be cut out of all space instead of existing in any independent way. But our practical use of experience and intuition will have to be vivified and glorified somewhat if we are going to use these as ways of knowing the world as a flowing process, evolving system, and creative scheme. We have had our dealings with and have based our calculations upon inert matter, but when a Theory of Knowledge is to be based upon a Theory of Life, our cognitive process will have to be born again. The same will hold true of what we usually call activity, since our habitual exertions, which go forth into the world of things to handle and shape them, must now turn inward and exert its powers upon the staid thoughts of the mind. If, then, we are in a mood to exert ourselves so that our dead experience shall become vivified by living intuition, we can begin to bergsonize our philosophy.

Now, the temper which Bergsonism is likely to engender is something far different from the cool intellection in which one adjusts a formal

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mind to a fixed world, with the hope that the adjustment will be sufficient. Of course, this can be done, and Bergson will never deny it; but such an adjustment of thoughts to things will be like building a raft with parallel sides, only to awaken to the terrific realization that the impromptu craft is afloat upon a vast and powerful stream, which carries the whole psychophysical creation along upon its surface. As far as the things of this world are concerned, we are in no position to redeem them from the danger of their deathly reality, but we may be able to do something for our minds; and since we are in pursuit of Bergson's way of thinking, we will indicate what that is like.

Freedom and Truth

In this philosophical pursuit, we can make some initial headway by reversing a common maxim, "Ye shall know the truth and the truth will make you free." In the present instance, the exercise of freedom precedes the acquisition of truth; hence we must say, "Ye shall be free, and then ye shall know the truth." The usual conduct of the understanding, which in our reasoning along the lines of induction and deduction seems so difficult for us, is really a lazy way of following the lines of least resistance as these are laid down for us by the forms of objects and the mechanical behavior of things.

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This inert and imitative relation engenders at once a "natural geometry" in which even the savage is more or less adept, since he better than the civilized man can judge distance and direction with surprising accuracy. Indeed, we might imagine the primitive Pythagoras of the Stone Age coming upon a pyramid-shaped stone which he could turn over from side to side without causing any change in the figure, whence he could draw certain significant conclusions about the nature of inanimate objects. In Bergson's mind, our mathematics and logic follow from such obvious observations. We are the born geometers who are at home in the world of the inert and dead. Something must be done to the mind to make it a vital *organum* able to embrace time and motion, life and freedom.

Intelligent enough are we—and how sophisticated has our science made us!—but we have such intellectual insight into the dead forms of things that the living content and animating intention have escaped our minds. We have let the things of this world lure us, and in the rational comprehension of them we are persuaded that we are wise in the ways of reality. In vain do skeptics warn us that we are touching only hollow shells and mastering but the appearance of things; we believe that we are dealing with utter realities whose regions we measure and their relations comprehend. When we reflect philo-

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sophically, we awaken to the realization that the scientific view of things is all too true, since it yields the artificial clearness of a pictured landscape as seen through a stereoscope. Perhaps, as the ancients suggested, our knowledge does not know. Or, as Montaigne recommended, we should be dumb in order to be wise. Or, as Bergson insists, we must be free if we are to know.

Drawing the Kites In

“We must, by a strong recoil of our personality on itself, gather up our past which is slipping away, in order to thrust it, compact and undivided, into a present which it will create by entering.” Such an effort in the reverse of our natural procedure might be likened to that of a boy flying a kite which slips away from him with such ease and is with much difficulty drawn back into his possession. Now, inward and intuiting effort of this sort is necessary for our minds, if we would bring our knowledge back to its original source. Bergson himself likens this effort of intuition to the experience of a person who listens to a poet read his verses. As long as the listener heeds the meaning of the words and enters into the intention of the poet, just so long will he grasp the meaning of the poem as such. But let his attention relax, and he will find himself getting no more than individual lines, phrases, words, syllables, letters, whence

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the meaning of the production is lost to him. Thus it is only as one keeps recoiling upon his ideas, drawing in his kites and reenforcing his powers of attention, that he can grasp the intuitive meaning of vital existence.

All of this has to do, however, with the mood in which we entertain intuition, but not so much with that mental process itself. What is intuition? Naturally it is not easy to answer a direct question of this sort; not because we are unable to grasp the subject-matter or are mentally deficient in powers of definition, but because the thing in question does not permit of anything definitive, especially as it is not a thing at all. Aye, its very nature is such as to render it indefinable however fully it may be felt. We can tell how it is lost in the more usual exercise of intellect, but cannot so easily show how it may be found again. In spite of the inherent difficulty in handling the intangible, we are not rendered wholly helpless when we aim at intuition on the wing and try to bring it down. We pursue it after the manner of instinct, just as empiricists follow *a priori* ideas along the line of the innate. That is, we get at it in a corporeal, animalistic way.

The Ignorance of Intellect

Now, if Fabre, from whom Bergson seems to have learned so much, was the "Homer of the in-

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sects," Bergson may be regarded as their Plato. He has profound respect for the silent, subtle forms of instinct, for he believes that it contains its own solution of the problem of life. Instinct commends itself to his thought, since it deals with things, not merely with relations; is categorical knowledge of matters, not merely hypothetical knowledge of forms; and with its implicit logic of intension, it finds the things which the intellect forever seeks. The intellect has a place and fulfils a function, to be sure; but its place is the inorganic world, as its function is to fixate ideas and install inertia. It forms clear ideas of things when they are distinct and immovable, just as it has power to take things apart and put them together again in such a way as to suggest that space is an enormous jigsaw puzzle to be broken up indiscriminately and then put together according to a plan. It is just this which the scientist does with his geometry. But this signal victory over the things of this world is really a defeat, inasmuch as, in yielding an outer unity, it deprives us of an inner one, so that the more we know matter the less we understand life. "The intellect," says Bergson, "is characterized by a natural inability to comprehend life."

But here is the place where instinct steps in to fill up gaps, provide continuity and vivify the mind. It lets us live the things which our

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logic only represents. Its touch with things is so perfect that we can feel their meaning by a process of "divining sympathy," so that we enter into the very inwardness of life. But this is not knowledge, since it lacks consciousness, is not disinterested, and has no power to reflect upon its object and thus enlarge its scope. This disinterested and reflective consciousness had to penetrate such instinctive intelligence or the human mind would have been riveted to its objects, hypnotized by its efforts, and condemned to a condition of somnambulism. Now, the philosophical recommendation which seems to be implied by such criticism is to the effect that the intellect would do well to turn its light inwards to illuminate the vital process there, as it has habitually turned its light outwards toward the inorganic world. It is, perhaps, only the Delphic oracle of the twentieth century saying, "Know thyself! Know thyself as a living, instinctive, intuitive consciousness, and not merely as a thinker!"

Such a system of intuition, which is of itself bound to lack clarity, becomes more distinct when its faint light is thrown against the dark background of intellectualism. We gather what it is when we discard what it is not. In contrast with his fellow mystic, Eucken, Bergson does not for a moment hesitate to reenter the field of intellectualism which he has abandoned; and

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where Eucken indulges in no more than significant impressionism, Bergson proceeds to definite analysis. He is so convinced that he has found a new mode of philosophizing that he is more than ready to review the old one whose shortcomings he delights to point out. He can afford, he feels, to give the intellect all manner of credit, since at last he can refer and return to the living world of mobile reality; just as a sailor on shore leave strolls with confidence about the port because he can always return to his craft and put to sea again.

Intellect Leans on the Will

Bergson's first excursion into the intellectual order is made with the guidance of Pragmatism, which affords him a sort of philosophical escapade. Indeed, his overtures to this theory are so marked that we might imagine him to be a Pragmatist, altho at best, or worst, he is only a Pragmatist of the second order, a Pragmatist *pro tempore*. Since Intuition provides his method of knowing *par excellence*, Bergson can afford to experiment with this theory and even employ it to the utmost. This quasi-Pragmatism appears at the very outset of his *Creative Evolution*, which introduces a sort of pragmatic psychology pursued in a spirit somewhat cavalier-like. How has the intellect been formed? In close association with and dependence upon action, so that

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it is really "an appendage of the faculty of acting." How does it proceed? In the lordly manner of Aristotle and Galileo? No, but rather in slavish imitation of the will which works among inanimate objects and thus teaches the intellect "to think matter." With all its successes here, can the intellect hope to embrace reality when reality is regarded from the evolutionary point of view as *The Flux*? Can the part know the whole or the "pebble on the shore display the form of the wave that brought it there"?

It must be confessed that our intellectualistic moods are bound to be disconcerted by such evolutionary psychology, which, in Bergson's case, makes mind so circumstantial when an older evolutionist, like Herbert Spencer, could land it at last in a strategic position. "Evolution," says Bergson, "begins by showing us in the intellect a local effect, a flame, perhaps accidental, which lights up the coming and going of living beings in the narrow passage open to their action; and lo! forgetting what it has just told us, it makes of this lantern glimmering in a tunnel a Sun which can illuminate the world." We can come to an understanding with the intellect only as we consider the pit whence it was dug, the rock whence it was hewn.

The crude and narrow home of the human intellect was not in the clouds but the cave. Man

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made a tool before he formed a thought. His was the intelligence of Man Making, not that of Man Thinking; or *homo faber* rather than *homo sapiens*. Life was his major premise, action the minor, and thought the conclusion. His initial efforts in making and using instruments out of inorganic matter let him into the secret of the physical world, that of geometry, which is eminently fitted to express the genius of matter and just as well adapted to the operations of the intellect. Once this geometrical method has been adopted, man is astonished to observe how it puts his mind on an equal footing with matter. He tears himself away from practical operations and begins to grasp the whole universe in a geometrical system of astronomy. He pursues this further and observes that, by refining and rationalizing space, he can approach the border line of abstract logic and thus, still handling physical objects and still manipulating space, as it were, can elaborate the deductive logic of the ancients and the inductive one of the moderns. When the Cave Man made a club, little did he dream that he would become the ultimate model of Plato and Aristotle, of Newton and Einstein!

Natural Geometry

Bergson's conception of real mind as a form of activity lets him pass through Pragmatism as

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a man on a long journey takes a short cut through the woods. He is now prepared to discuss the nature of the intellect as such, and to witness both its victories and defeats. Its triumphs are those of science, perhaps also philosophy, history, and knowledge generally. In mundane matters, science has shown an extraordinary ability to comprehend and conquer that portion of nature which came within its grasp. It has been even more startling in its astronomical exploits, which have removed the veils of space and time to disclose an eternal order. On the earth and in the sky, the thought of man has availed itself of what Bergson calls "natural geometry," which it has glorified in the geometrical method of Descartes. But this dialectical descendant of the pioneer philosopher of France is not over-awed by the splendid achievements of the human understanding, which has indeed advanced from the light of the lantern to that of the sun. He will draw around all these pretentious notions of the mere intellect the wider circle of intuition. He will take hold of the geometrical mind, and will show how it came to intellectualize itself and spatialize its world; for, as he says, "The more consciousness is intellectualized, the more is matter spatialized."

Common-sense thought is usually satisfied with a descending analysis which finally arrives at the

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intellectuality of mind and the spatiality of matter. It may know of a certain kind of psychology which digs under the intellect and a penetrating physics which undermines extended matter; but these seem more theoretical than real, more to be speculated about than built upon. But such a commonplace level of psychophysics is no suitable mark for the ambitions of Bergson's mystical metaphysics. He will dissolve the intellectual and spatial; aye, even intellect and materiality, so that they will float side by side on the surface of the great Flux. Then we shall be in a position to understand how thoughts and things interweave in the total experience of mankind.

Ever since our modern philosophy came into being, we have been puzzled by the plain but paradoxical relationship between the rational and real, the thoughts of the mind and the things of this world. Consciousness had no actual difficulty in drawing physical stimuli into itself to form sensations; as little impediment was there when the will fared forth to operate in the alien world of mechanical things. It was the theoretical explanation of the correlation which invited the trouble and caused the metaphysical worry. It was not that our thought tried to put mental and material together, for they dovetailed naturally, and both investigation into nature and operation upon it invariably corroborated the

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connection. No, philosophy tried to pry the pair apart for the purpose of interpreting their unique relationship. One does not hesitate to plan a house mentally and then proceed to build it materially; a mathematician deduces certain theoretical consequences and then proceeds to draw them on paper as he had drawn them from the mind, or even observe nature delineate them as with a gigantic pen of iron. How was this systematic coincidence to be explained? Shall one have matter stamp its forms upon the mind, or the mind place its impress upon matter, or shall one set up some parallelistic harmony between them? Even to this day, one is bound to feel amazement at this agreement of opposites and harmony of discords. The burden of the obvious is too great for the brain.

The Eden of Mind and Matter

Bergson accepts this burden joyfully if not jauntily. It may appear as "more daring than the boldest speculations of metaphysicians," but he is in possession of a method equal to the task. It is the method of *Evolution*! Yet the moment we have used that now-familiar term to express Bergson's idea, we realize that, in the familiar sense of a progress and perhaps in any sense, it is inadequate. Better is it, then, to consider intellect and materiality, which fit together so eminently, as being engendered instead of

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evolved. Now, the radical difference between an engendering and an evolving is one of direction; for engendering is downwards, while evolution is upwards, if we may use spatial ideas figuratively. But it is by means of engendering that we account for the genesis of intellect and the analogous genesis of mind. We cannot take mind as a point and expand it into a world. We cannot take matter as extended whole and contract it into the punctual intellect. For neither act, as performed separately by idealist here and realist there, would give us the genesis of either; neither method would amount to an engendering.

To engender is to see that both intellect and materiality have descended from a higher level to a lower one, just as it is to realize that the water in Lake Ontario has come from the water in Lake Erie by way of Niagara Falls. Both intellect and materiality have undergone a common descent, a common "degradation" from a living, fluid condition to a dead and solid one. Both have been degraded, we might say, from a dynamic condition to a static one. No wonder, then, that they now correspond; they have "progressively adapted themselves one to the other to attain at last a common form" of the geometrical. Together they represent a common diminution of being by means of an extension in space and a detention in time. When we per-

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sist in feeling amazement that the order and connection of things should be parallel to the order and connection of ideas, we should consider both ideas and things as being identical deposits on the opposite banks of what once was a vital stream. In this manner the real passes from tension, from freedom, to necessity—the inversion of the Vital Order.

The Living Absolute

But what is that all-real, all-vital something from which intellect and materiality have descended, and whose pure essence now appears in the diminished form of experienced existence? For want of a better term, Bergson calls it "Consciousness," as Eucken would style it "Spirit," and as plainer thought might name it "God." It is "creativeness," which is different from both Creator and Creation in that it produces by easing up instead of by urging itself outward. It has in it no idea of a making-process common to the theological idea of God creating the world, but partakes rather of the thought of Plotinus when he makes so-called creation an extension and weakening of Being, or that which is beyond both being and thinking.

Now, what can be done by us when we attempt to grasp this ineffable Somewhat? We can make the will recoil upon itself, twist it about on itself, act in a free way and thus liberate the mind

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from logic. This, which in a way is of a moral nature, has its counterpart in the metaphysics with which we treat the world. True, we cannot make it "remount the incline which physics descends when it pushes matter in the direction of spatiality," but we may be able to discover in nature a principle which, akin to the limited, striving human will, is actually attempting to effect the ascent of the incline which matter descends. This principle we discover in the Vital Thrust, the *Élan Vital*. It is life as we know it, striving like the will to set itself free from the inorganic world; but it is finite and ever hemmed in by matter, so that instead of changing the course of things from downwards to upwards, it can do no more than retard their descent, if not their death. The attempt of life to regain its one-time elevation gives us the meaning of Evolution. If we will let mind in its fullest sense entertain the idea of life in its real meaning, we shall gain the knowledge which can never come from the intellectualistic adaptation of intellect to materiality, as we find this in both Empiricism and Rationalism.

It is difficult for us to avoid amazement at the way in which this practical mystic takes hold and disposes of the things we had counted upon as fixed. Of course, we saw modern biology take the set circles of independent species and link them in the form of a moving chain, so that we

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have grown somewhat accustomed to the ways of mobile thinking. Our docks drift almost as readily as our ships sail, and in the floods of our modern thinking river-bank and river-bed become parts of the gigantic stream. But in the reality of the inorganic and intellectual, we expect a steadfastness which fails us when we are dealing with organisms. Hence we are disconcerted and inclined to doubt when Bergson ignores our standards and removes our landmarks. He takes them up and sets them down again, but in their new position they are only relative and temporary.

We would say, as of old, "Thought is here and extension there; they are sadly juxtaposed, but we can count upon them for our calculations." But here is a way of thinking into the nature of things which makes mind more than thought and matter more than extension, so that the fixed *cogitatio* and equally fixed *extensio* are practically lost to our logic. Kant indeed drew space back into the mind to constitute its most commanding view of the world, but this thinker pushes both space and mind back into the Flux, where their original relationship is maintained only in the way that two vessels may keep abreast as they navigate the same sea. Consciousness is not inherently intellectual, but it may be made so; matter is not necessarily

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spatial, but it can be spread out over an extensive field.

The Reality of Time

This general attack upon the intellectualistic mode of procedure will become clearer when we attempt to meet two of Bergson's flank movements. These are made by time and motion, and are directed against space and matter. As to time, the mysterious function of all things, we may assume that herein is found the supreme principle of Bergsonism. Time is his favorite idea, his first principle, his god; by it are all things judged. Ourselves, we do not take our time so seriously, but regard it as a secondary principle of reality as the course which things take, the velocity which matter acquires, the means which evolution has employed. We do feel it within ourselves, but we assume that its touch is not fatal; we do observe it in things, but we are persuaded that its sway is not omnipotent. But Bergson has been more fully impressed by the temporal process which seems to rule reality and make all nature a process of growing old. Time is for him, then, something utter and ultimate. "If time is real," said Bradley, "our Absolute is a delusion." "If the Absolute is real," Bergson seems to say, "my time is a delusion."

Of late, we have seen time poured into space

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in the form of an extra dimension in the fuller space-time framework of physical Relativity, but we imagine that this physical time of Einstein is not the domineering, destructive thing which Bergson insists on using. It intrudes upon space and matter, but is itself under some sort of control. Like the rest of us, Bergson makes the distinction between time-order and time-lapse, so that, in a way, we feel at ease in Bergsonian duration. But we are immediately unhorsed by his claim that time-order is not the thing at all; it is time-lapse, living, moving, penetrating time which counts in the real world. Time is not alien or antagonistic to reality; no, for when we experience the temporal, we entertain realities as angels unaware. Then we realize that time is at least analogous to ultimate reality. It is not a mere form, but sheer force which accomplishes results, makes things and thoughts, and provides for novelty in the universe. We may set up a system of rational mechanism as the basis of reasonings, but it is once and forever refuted by the consideration of real time in the way that the firm raft is "refuted" by the flood which sweeps it along. With such a rich and realistic sense of time in mind, Bergson proceeds to deliver time, and motion also, from the hands of its intellectualistic friends.

Intellectualism was naturally a bit arbitrary in dealing with its subject-matter. Things and

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thoughts had to be fixed if they were to be known, just as, in the days of old photography, one had to sit still if one wanted the picture taken. How did intellectualism place its object when it made it pose for the rational picture? With space and matter there was no trouble, since these forms of still life were adapted to the static by which they existed. With time and motion, it was quite the other way; they are naturally dynamic, so that there is something wrong with fixed representations of fleeting objects. The thing that the intellect did with time was to take it or think it in terms of "instants," like the marks on the dial of a watch. The thing that it did with motion was to consider it in terms of rests, like numerical degrees on a thermometer or figures on the face of a speedometer.

But in vain was the net spread in the sight of the bird; the human intellect was as the child racing about and crying "Bat, bat, come under my hat!" For time is not a fixed instant or any number of these placed side by side, closer and closer together: motion is not made up of rests, no matter how many of these we supply. Our miserable coppers may amount at last to the value of the gold piece; but this is only arithmetic, which arrives at a mathematical result, not alchemy, which would alter the natures of things and thus change base metal into gold. Feel time,

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live time, use time, and you will understand its nature; but the moment you begin to think time, its glory is departed. Now, what is the secret of this predicament?

The Flux

The predicament arises because the intellect uses inertia as its first and final law. It must deal with something definite—a number, an idea, a law. To obtain the definite, the intellect must check the course of things, which will mean instants of time and phases of motion. In its desperation, as it sees fluid time and motion trickling through, it may use finer and finer methods to the thousandths of seconds, but the intellectual vessel is still a sieve. Apparently there can be no commerce between the fixed intellect and the fluid world, no mutual understanding between mind and mobility, since they speak different languages. The intellect has its place and performs its function when it guides action in the direction of inert matter, but its usefulness is at an end when the coastline of durational, mobile reality is reached. Hence, it seems, we must abandon our staid vehicle of thought and avail ourselves of a vessel fit for the fluid order of reality.

The philosophic passage-at-arms arrives when Bergson shows us how, in his opinion, reason is paralyzed when it attempts to account for

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motion in the temporal mode of velocity. By the use of ancient dialectics and modern science, he seeks to dismiss all rationalists as one man may chase a thousand. The metaphysical paradox of Zeno is united with moving-picture apparatus, so that the old puzzle of motion becomes the new "cinematographical illusion." We persuade ourselves that we see and think motion when nothing of the kind is possible. We verily know that Achilles will catch the tortoise even when the swift runner must first come to the place which the slow walker has just left; we are sure that the minute hand at three o'clock will pass the hour hand, which is a quarter of the distance around the dial. Our trouble arises when we endeavor to give a reasoned account of what is so surely experienced. We are brought to a pass where experience and reason have had such a falling-out that, apparently, we must stand and choose which we will serve. The experienced course of things seems to be of one order, the rational relation of them of another. Zeno chose reason, Bergson takes experience, but we want both.

Our apparent trouble is that we are now thinking time in terms of space and looking at motion after the analogy of matter. We have spread time out in order to measure it, and have laid motion down along its physical path. If we treat our puzzle technically, we can reason that

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time above the space below, so to speak, may be adjusted in such a way as to have both time-lapse and time-measurement. If the opponent of rationalized motion proceeds to disconcert us by breaking up the space to be traversed into an infinite number of parts, we will meet him by doing the same thing with the time which is to elapse in the way that space is to extend. Every time he confronts us with a jot of the spatial, we will match him with a tittle of the temporal, and thus keep up an "instant-to-point" correlation, which will make the matter more difficult for him and, perhaps, easier for us. He will have to admit that now, with as many little times at our disposal as he has little spaces, we are in a better position to appreciate the puzzle which, however, we cannot as easily solve; and it does look as tho we were assuming in an empirical way what we should prove in a rational manner.

Snapshot Judgments

Now, Bergson presents the puzzle in a vivid way when he likens the views of motion assumed by the philosopher to the snapshots of the moving object as these are taken by the movie photographer. Of course, there is motion in the object and another form of motion in the machinery of the camera, but no such motion is found upon the film. There it is a protracted series of single, stationary pictures which are

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run off in such a way as to create the illusion of motion. But this was a fairly dangerous illustration for Bergson to use. If, with the old photography, we were to have a row of cameras placed side by side, each to produce its single picture of the object as it passed by; and if, later, we were to scan each separate exposure no matter how rapidly, we might admit the validity of his photographic objection to our supposed grasp of motion. But with the moving-picture film as with the living eye, we feel that, for all the separate representations involved, we are obtaining motion as such. The mobility of the eye and the mechanism of the camera give us motion in a kinesthetic, cinematographical manner.

So, likewise, with the simpler representation of time by means of a spatialized dial, which gives an exact albeit artificial conception of temporal flux. When we let the second hand go, as in timing a sprinter in a race, the movement of the hand gives some general idea of the speed of the runner on the track; when we use a stop-watch and thus fixate the very instant when the runner reaches the finish, we do not stop time or give up our way of measuring it. All that we do is to indicate that we are done with the special portion of time which interested us. If our chronometers were all stop-watches which ceased ticking at each second or fraction thereof, we might complain that we had no means of grasping

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time's meaning. But when we measure moving things, we use moving apparatus which operates in a different manner from the yardstick which doesn't move at all. We do place ourselves within the temporal order just as Bergson says we must do; but, instead of being satisfied with a personal impression of time, we carry along a moving mechanism adapted to giving us that temporal impression which is true for all minds, so that to one it may not seem short, to another long.

...But has the intellect of man any such apparatus which will prove effective in letting us grasp that mobility which is obvious in nature even when it may not be absolute? Or must we abandon intellect and embrace intuition? The advantages of intellect are apparent; it gives us our science, our philosophy and serves in less rigorous ways. The advantages of intuition are less palpable, since it appears to be more of a last resort than a first principle. If, now, duly crediting the intuitive faculty with its ability to enter into the nature of things and account for their inter-relations, we can absorb these advantages intellectually, we shall be like a ship-owner who profits by the cargo which his vessel brings home in its hold.

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But Will Not Thought Do?

The intellect is usually staid in the way it seeks to exercise steady vision. It resorts to methods which are frankly artificial, as in the form of simple counting or in the process of deductive reasoning. But the achievement of an end, as in enumerating or reasoning, is not the whole, altho it may be the most spectacular part, of the story. Leading up to it is the long and often tortuous line of thinking whose inherent difficulties require a power of attention equal in arduousness to a possible effort of intuition. Now, that which pursues a path similar to that of intuition, and arrives at ends which intuition can never find, is the process of Thought; it lies behind all philosophy, all science, all genuine activity of the human mind. A process indeed is thought, since it does not begin with the neat definitions which come to be elaborated later, or form logical judgments of a strict sort until it has first used simpler connectives peculiar to the psychological process of cognition. The very use of that expression, "psychological process of cognition," is calculated to convey about all that it is reasonable to expect of intuition.

When the thought-process, starting with sensation and feeling and guided by attention and memory, does perfect itself, it comes into possession of a method admirably adapted to both

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space and time, matter and motion, the inanimate and living. For it is of the very genius of thought to penetrate into the essence of objects, as material atoms and living cells, while it has in it the power to bridge over gaps which may appear in either the train of ideas or the course of nature. Thought punctuates when it deems this desirable, but it is more likely to pursue the smooth syntax of reasoning and thus involve what is conjunctive and harmonious in both reason and reality. If it had not been a natural process, it could never have given us science; if it had not been continuous in its character, it could never have expressed man's rich experience in the world. Even after it has been subjected to the critical analysis which comes forth from logic, it rejoices in a degree of "vague nebulosity" and "indistinct fringe" due to the finitude of the human spirit, as also to the unwinding of old threads and the introduction of new ones. The kind of intellect to which Bergson refers when he contrasts it with intuition is something which exists only as a logical norm, not as a working intellect.



OUTLINE OF PHILOSOPHY

PART II



THE
WORLD'S ESSENTIAL KNOWLEDGE
VOLUME III

OUTLINE OF PHILOSOPHY
PART II

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II

IRRATIONAL SCHEMES

(Continued)

PRAGMATISM

IN taking up Pragmatism, one is supposed to employ due documentation and thus note that the term was first used by Mr. Charles Peirce in an article which appeared in the *Popular Science Monthly* in January, 1878. When he used this term, the author further indicated its meaning as that of philosophical method in the light of which we should consider the practical consequences of theoretical conclusions. This was little more than a suggestion of how speculation might be carried on, and might have amounted to nothing had not William James adopted it twenty years later to glorify it with literary style and magnify it with philosophical meaning. Now it turns out that, as James said, it is only a "new name for an old way of thinking." It is, at any rate, the special name for a method which in the

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past has been perhaps little more than a mood. Something deep-seated in human nature cries out for Pragmatism, which emerges into human thought because there is a demand for it, not because gentlemen write articles for popular periodicals.

Philosophy by Another Name

While we must assign credit or discredit to our century for the discovery and use of Pragmatism as a new method rivaling old ones, we cannot ignore the fact that the pragmatic quality adheres to our thought, which is always something more than a clear-cut process in a restricted field. It is only because Intellectualism eliminates these natural accessories when it employs abstraction that the circumstances of our human cognition are lost to view. If it had not been that Socrates used abstraction in order to get at knowledge by way of general definition, philosophy might have followed Protagoras, who was pragmatic to the extent that he turned away from the abstractions of both physics and psychology and made man the measure of all things. This is, indeed, the pragmatic tone, and this the spirit which one indulges when he makes knowledge subjective and relative. However, if Protagoras had been a Pragmatist instead of a Sophist, he might have realized that the consequences of such subjectivism, as these were likely to appear

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in politics and ethics, were far from fruitful ones.

As an old way of thinking, Pragmatism in the larger sense has affected even Rationalism to the extent of casting a shadow of doubt upon its most certain principles. Let logic lay down the Law of Identity, and it is still an open question why we should accept the dictum that, "Whatever is, is." We feel, perhaps, that it is in harmony with our personality, for we say, "A is A" in the same spirit that we say, "I am I." Or identity yields a feeling of satisfaction which could not arise in a wonderland where things might be what they were not. There may be, also, intuitive grounds for accepting the principle; something inscrutable appreciated, rather than something explicitly thought. Once we have made what we will call the assumption of identity, the fullest, most favorable consequences follow. Or, in that most classic of all syllogisms, which proves the mortality of Socrates from the mortality of man, we may find it difficult to prove our major premise—that all men are mortal—but it affords a very convenient way of reasoning just the same.

The Rationalist as Pragmatist

The pragmatic character of Rationalism should not be ignored in the case of the most commanding of scientific discoveries, the Copernican as-

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tronomy. Once the motion of the earth and relative rest of the sun are assumed, as they are so readily to-day, the astronomical consequences follow with mathematical precision. But the original assumption made by Copernicus himself seemed to him absurd as it struck his contemporaries as dangerous. It was quite the opposite of self-evident; but where it lacked immediate plausibility it had a prospective value, since it might turn out to be fruitful. Certainly the calculations of Copernicus in his attempt to show the revolution of certain celestial bodies cannot be taken as final any more than the reason which Newton assigned when he made gravitation the cause of these phenomena. But, in the language of Pragmatism, the theories of Copernicus and Newton worked, and still do provide scientific satisfactions, even when the Newtonian view is beginning to look a bit old-fashioned. In the spirit of caution, we speak of such physical theories as "good" theories, just as we refer to an accepted form of pronunciation as good pronunciation; for, we hesitate to indulge in such absolutistic expressions as true theory and correct pronunciation.

The inability or unwillingness of the mind to make a clear distinction between good and true, as also to keep consequences away from conclusions, appears more vividly in the field of experience, which is the precinct par excellence of

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Pragmatism. Experience itself, since it has not undergone the process of abstraction peculiar to rationalized thought, is a mixture of theoretical and practical, a combination of the practically good and theoretically true, and the common field of mental observation and volitional activity. This makes it possible for the Pragmatist to settle down beside the Empiricist, and to avail himself of the arguments which the Empiricist has ever used in his opposition to *a priori* reasoning. Thus it might seem as tho the practical were the same as the perceptible. There is, however, a difference between the two. The Empiricist tends to repose in the present agreement between things and the ideas that are thought about them, and the way this immediate relationship has established a precedent. The Pragmatist tends to start with present experience and then look toward the future with the idea that our ideas will work out in a satisfactory manner and produce the desirable consequence.

Empiricism Quite Pragmatic

Now, the usual procedure of Empiricism, as we have seen, is such as to involve a certain degree of the prophetic. When Sir David Brewster discovered that the cause of color in certain substances was due to their form, he looked beyond the mother of pearl in which he had observed it to the alien substances of beeswax,

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balsam, and the like, in which it was to be found. When Count Rumford and the others who experimented with heat and motion advanced from simple observation to exact experiment, they were futuristic in their expectation of a degree of novelty in even the mechanistic order. And when investigators in the social sciences cast about for the causes of crime, war, poverty, and the like, their methods are not at all deductive, only partly inductive, and largely pragmatic.

With the Mysticism of both Eucken and Bergson, there is at least a suggestion of the pragmatic in that both of them use some method other than that of Intellectualism. In Eucken's case, however, Pragmatism is only in part discernible, since he avails himself of experience only for the purpose of emancipating the immediacies of spiritual life, in which he seeks ideals rather than utilities. He would exercise the belief in a unified spiritual order, not a series of beliefs in particular things in nature and society. Bergson, as we have seen, surrenders to Pragmatism for the time, but that is only for the purpose of showing how intelligence came into being. He is an "Instrumentalist" in the sense that he sees in the intellect a light held up over the field of action; but the theoretical results which this light reveals, being those of a purely geometrical character, are abandoned as soon as

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they are found. Pragmatism is thus more a means of dislodging the intellect than of establishing intuition, the true ground of knowledge.

In addition to these stated forms of reasoning as they appear in distinct theories of knowledge, there are various human concerns in which a liberal use of Pragmatism is apparent. Life must carry on in a somewhat reasonable way, and since there is no opportunity for the free exercise of any intellectualism, man will avail himself of practicalism. He will take up lines of activity which look promising, or maintain such forms of conduct as have shown themselves serviceable. Long after their fictitious character has been discerned, they will be retained because of their usefulness under the circumstances. Those who adhere to these practical views *may never have scrutinized their grounds*, or, if they have looked into the logic of their beliefs, may be somewhat ashamed of it. But Pragmatism is fairly plausible, especially when we realize that we are confronted usually by conditions rather than theories. Aren't we all Pragmatists?

Political Pragmatism

In the political order, where men must be ruled and things administered, the statesman cannot wait until a philosophy of rights has determined the just relation of man to man and

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men to the State. They must avail themselves of the conception at hand and use it for the sake of its practicality. An enlightened Englishman would hardly subscribe to the doctrine of the divine right of kings or even to a monarchical form of government, but here is the king and here his monarchy, and the practical problems of State can be solved in the form of a good consequence from a false premise. A radical American may have as little theoretical belief in the divine character of democracy in a land of mixed races and varying degrees of intelligence, but the business of the nation can be carried on better by means of such an inaccurate notion than by the attempt to recast politics more after the manner of the theoretical philosopher. In such cases, we resort to good beliefs instead of true ideas and are often surprized to observe how much that is inconsistent, if not false, can be absorbed. The body politic is surprizingly able to find nourishment in and gather strength from foods which philosophy cannot pronounce pure.

The application of Pragmatism to politics is unmistakable in modern legislation. The lay mind has long been in the habit of believing that laws were framed in the way that conclusions were formed; for, just as one deduces logical consequences from a universal premise, so the man in the street assumes that just laws are made in the light of justice as such. His assump-

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tion is that any law which confronts him can be traced back to an eternal principle of rights, when it may turn out that it dates back only to the adjournment of the legislature. This is because our legislators are animated by the pragmatic spirit of that which works when applied practically to the social order. Like St. Paul, we distinguish between "things lawful" and "things expedient," and then allow expediency to exercise authority over justice.

This situation, which has given the United States perhaps a million laws of some sort, all told, is due to the pragmatic tendency in society, which does not take time to decide whether this is just and that unjust, but says, "Congress ought to pass a law" when the only obligation in sight is the real supposed expediency of uncritical legislation. This Pragmatism, this Empiricism in legislation, may afford satisfaction to those philosophers with whom consequences of an immediate sort are paramount in both theory and practise; but it cannot commend itself to those who look for rational sanctions in the things which man both thinks and does. If Pragmatism here rules *de facto*, it does not exercise authority *de jure*, and it is only our ability to absorb error which saves us even greater inconvenience than we now enjoy.

We are just as pragmatically inclined in our discussions of the social order. Can we deduce

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Society from some higher conception as "synthesis" or build up the idea of it by a slow process of induction? Either of these well-known processes might be resorted to, but we prefer to be led into a social conception which practically follows the analogy of the living body, whence we regard society as an "organism" just as Leslie Stephen did some fifty years ago. And altho this conception of our race does not fully commend itself to the social philosopher, it has the advantage of working to the extent of making society intelligible to us. In like manner, we follow Herbert Spencer in his theory that Society has passed from a period of militarism to one of industrialism, altho the World War showed us that the period of militarism was not at an end and that the interests of industrialism were not wholly distinct from those of militarism. But in default of more coherent theories we decide to follow those that yield only practical certainty.

Esthetic Pragmatism

No less pragmatic are we in the conceptions we form in connection with our esthetic experience. We are directly conscious of the appearance of fitness among objects which we sense, and just as fully aware of the agreeable way in which often they affect us. But we are unable to interpret this situation in any rational man-

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ner, hence we adopt views to the effect that art is imitation or play or expression. In all probability, art is no one of these, but the idea of something mimetic or spontaneous or expressionistic serves our practical needs even when they are of an intellectual sort. We cannot rationalize the beautiful as easily as the true and good, hence we are prone to subordinate it to these more stable ideas, as tho beauty were the truth of matter not so distinctly seen, or the goodness of man not so fully realized. That is, we follow the trend of logical and ethical consequence instead of drawing a line of sharp inference.

But those orthodox esthetes who used a kind of Pragmatism in effecting the logic of beauty could have little inkling of the way in which art was to *abandon all set forms and give itself* to expressionism generally, futurism in particular. When we ourselves, to-day, attempt any sort of justification for the exaggerations of harmony in modern music and the exploitation of technique in painting, we are most likely to assume a pragmatic point of view and thus assume that the obvious distortion of beauty in tone and color is indulged in with the pragmatic feeling that something valuable will come of all this. Altho sophisticated to an alarming degree for the esthetic mind, which is supposed to be naïve, we chose to emulate the modes of primitive

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artists, who had still to arrive at the standards which we are departing from. They were in the prerationalistic period of art, we are in the post-rationalistic one. Theirs was a genuine futurism, since it led to something stable in its academic form. Ours is an experimental futurism, and we have no means of being sure that, in expressing restlessness of the time-spirit, we shall arrive at anything of esthetic worth. It is an esthetic Pragmatism which has still to realize the fruitfulness which it promises.

Pragmatism in the Pulpit

The field of religion is, of course, replete with these pragmatic references, altho it must be said that genuine religious teachers have tried ever to release mankind from them. This effort on the part of the spiritual educator is eminent in the case of the Prophets among the Hebrews and the Vedantic philosophers of the Hindus. However, that which forms the very body of religious belief is something which was not established by any process of protracted reasoning; it was rather grasped at with the feeling that it was desirable to the point of necessity. This sweet but strong impulse on the part of the most human mind was voiced almost a century ago by Emerson, in what is perhaps the most gorgeous sentence in his Essays. "What is the universal sense of want and ignorance but the fine in-

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nuendo by which the soul makes its enormous claim?" Now the "enormous claims" which are put forth by the anguished heart are such that they can hardly be met by pure intellection. As far as they are of philosophical character, they are pragmatic in form; altho, as in the case of religious prophet and philosopher, the wiser minds in the religious organization make an attempt at Rationalism, as can be observed in theology.

But this unconscious Pragmatism is applicable more to general religious notions in the past rather than to the more specific Pragmatism which has become, in considerable measure, the theory and practise of the Church in America. At the present time, sociology has stepped into the place which theology seems to be vacating, and is using Pragmatism instead of Rationalism. God is more of the animating principle of human amelioration than an object of either belief or thought. The Bible, when pragmatized, is less the successive revelations of a divine spirit, more the progressive consciousness of religion in the heart of man. Religion is not regarded as something deducible from the attributes of God, but rather as a "great spiritual adventure" or "ethical experiment." The outlook of the religious mind is directed toward the future with its flexible possibilities, not toward the past with its fixed traditions. In the spirit of direct and

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conscious Pragmatism, the advanced religious mind considers the moral consequences of belief rather than its metaphysical implications, which, in their scholastic form, are left to the exponents of Fundamentalism. The "universal sense of want and ignorance" is not made the basis of any "enormous claim"; it is considered as something to be supplied by religious education and social service.

Pragmatism in Morals

But the political and social, esthetic and religious expressions of the pragmatic mood, for all their zeal and vigor, are secondary to the kind of Pragmatism which emerges from the moral life of mankind. When the moral ideal is taken up in the form of ethical theory, it bears close analogy to the leading forms of intellectualism, whence Rationalism begets a kind of Rigorism, as Empiricism glides over into Hedonism. But the moral principle as such, taken in a massive way, engenders a kind of Pragmatism which rejoices in a degree of stability and dignity. The Good may be looked at either theoretically or practically, and That Which Is may be viewed plausibly as That Which Ought to Be. To be sure, this is not a pragmatic method, but it is a strong affirmation of the pragmatic spirit whence the method comes. Strong indeed, so that one might venture the assertion that, had it not

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been for the mighty claim of morality to be a way to truth, especially as this was put forth by Kant's *Critique of Practical Reason*, there had been no Pragmatism at all.

As the Super-Pragmatist, Kant followed a deliberate program. He did not wait for the painful discovery that reason cannot rule the mind, but carried out its destruction. "I had to destroy reason in order to make room for faith," said he laconically. As he had inaugurated a "Copernican Revolution" in the realm of the intellect, so he conducted a Robespierrian revolution in the domain of the will and installed the "Categorical Imperative," or more-than-divine obligation. This is the lever which lifts the world; this the principle which places God, Freedom and Immortality upon high seats they had abandoned when the *Critique of Pure Reason* appeared. And now the will can reason the way the understanding tried to do, and the proofs of enormous ideas be conducted with the absolute certainty of the moral reason. This was Pragmatism, but far more.

Pragmatist in Spite of Himself

But the place in Kant's philosophy which is most fitting as an entrance for Pragmatism is that section of the *Critique of Pure Reason* where Kant considers the "Interest of Reason in the Conflict of Its Ideas." This, which is a

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human interest indeed, is taken up after Kant has found that the uncritical pursuit of ideas, or categories, can lead only to contradictions, or antinomies. At this juncture Kant pauses for a pragmatic moment to inquire, as it were, how we humans must feel about the matter, only to discover that we have practical and speculative interests invested in the ideas which themselves seem to stage a conflict of their own as eagles might battle in the air.

When such questions as those of God and the Creation of the World, the Freedom of the Will and the Immortality of the Soul are under discussion, it is not merely a matter of true or false, as in an academic examination, but something of such deep, spiritual concern that the moral nature has a right to take its stand beside reason and see to it that a just decision is rendered. But what Kant introduces into the quasi-pragmatic argument as an influential factor is not the human nature of man as a creature, but the rational nature of man as a character. The result is that the decision, which is made later in the *Critique of Practical Reason*, is rendered in the light of man's nature as something so superior in its rationality that it matters not whether the decision is made by the rational intellect or the equally rational will. It is as if a good man were to follow his conscience in the

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same way that a wise man follows his reason. The results are about the same.

But the foregoing consideration of Pragmatism has had to do with the general methods and habitual moods of the human mind, which expressed themselves in their own way without any attempt to exemplify a theory of knowledge. They were pragmatic by implication only, or by courtesy. The spirit of Pragmatism was not wholly in them as it is in us to-day. When, now, we come to interpret that spirit, we are brought to the realization that it is the spirit of novelty; old things have passed away and all things are become new. It is a kind of "nowadays consciousness," which, if it cannot vision any complete philosophy of history, can content itself by making caustic remarks about the Victorian period. Our century has witnessed the discovery of so many unheard-of things and effected the invention of so many undreamed-of mechanisms that it cannot content itself with a philosophy which offers no more than a Law of Identity and Method of Agreement. For ours is the *nouveau* spirit which is not to be satisfied with old-fashioned philosophies any better than with old-fashioned costumes.

The Nouveau Riche in Philosophy

It is next to impossible to record the results which applied science has worked—our twen-

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tieth-century miracles—but the mention of automobile, airplane and radio will be a sufficient reminder of what science has recently accomplished. These locate us in a new order of things and fain persuade us that the history of mankind as such dates back only to the year 1901. This change has been brought about by a sudden emergence of a new spirit, not by any political and military revolution like that in France when the eighteenth century brought about its own end. When the World War came, it was more like the settling of an old account than the opening of a new one, and such is the buoyancy and self-sufficiency of our *nouveau* spirit that we have been able to absorb the unutterable frightfulness of a conflict which in another age would have ended civilization.

The sense of rejuvenation which the race appears to feel is accompanied by a feeling of sophistication, whence we believe that we have caught up with the learning of the world if not passed it. We may not know how to indicate the short-comings of older conceptions, like Euclidean geometry and Newtonian gravitation, but we are persuaded that they are inadequate and have waxed old as doth a garment. We cannot be impressed unless we are confronted with astounding views of man and nature and such as set aside all our normal expectations. When we are brought face to face with conventional views of

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psychology and physics, we are like Molière's *Doctor in Spite of Himself*; for when his impromptu patient protested that the heart was on the left side and the liver on the right, he asserted with confidence, "But we have changed all that!"

The practical effects of this creative spirit which has changed all things appears everywhere; in philosophy, it shows itself in the apparent destruction of intellectualism. Our one-time concepts have sunk out of sight, and experience itself seems to be afloat like an immense sargossa. The fluctuating, aye, fickle conception of things generally appears in mind and matter alike. No longer does a mental pattern match a material one, for mind and matter are but processes, voluntaristic and dynamical, respectively. Hence, thoughts and things cannot come to an understanding, since there are no thoughts or things to be placed in the intelligible relationship. Now, this rather riotous conception of things generally has been brought about by Evolution, or by the way Evolution has been understood and applied. We could tolerate the doctrine when it confined itself to the stellar evolutionism of Laplace, the terrestrial evolutionism of Lyell, and the biological evolutionism of Darwin; we cannot absorb it so readily when it invades the essences of mind and matter and

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attempts to dictate the evolution of truths about them. That would land us in irrationalism.

At this juncture appeared Pragmatism in the form of a theory which advised us to consider only the consequences of our ideas and beliefs. It was no longer possible to make our thoughts correspond with things in any definitive way, hence it seemed expedient to entertain such notions as were working out toward practical results, "getting somewhere," or which promised to work out and arrive. Indeed, a person fond of coining novel expressions, which even so may indicate only old truths, might style the pragmatic method as a sort of "Arrivism." Now, this sort of reasoning came about because of the way that the evolutionary idea cut into the nature of things; because, as the logician would say, it laid hold of ideas in their intension as well as their extension. About all that the Pragmatist had to assume was that ideas would work out the way things had, hence he could use Evolution as his model, his ideal.

Monstrous Hypotheses

The spirit of Pragmatism is expressible in terms of a remark attributed to the Emperor Vespasian, whose writings, however, do not seem to contain it. "The most monstrous hypothesis which produces results is better than the neatest, trimmest theory from which nothing follows."

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Pragmatism is thus a Vespasianism. It shows itself to be such in the way that it abandons neat and trim theories, like those of Intellectualism, because nothing follows from them; in the way that it adopts monstrous hypotheses because of their fruitfulness for action and thought. In pragmatic eyes, the endeavor to get truths from thoughts is as vain as expecting to gather grapes from thorns and figs from thistles.

The monstrosity of the method does not appear so strikingly when, in a semi-pragmatic manner, science makes use of an inclusive ether or a granular atom, since these things at least suggest something empirically wholesome. But when science avails itself of the notion that results of some sort may or might follow from preposterous assumptions, Pragmatism comes more fully into its own. Examples of this amiably monstrous method are findable in the various "Non" systems of physical speculation, as Non-Euclidean geometry, Non-Pythagorean algebra, and Non-Newtonian gravitation. The layman might suggest, if no more, that the assumption of an abysmal "Entropy" at the bottom of the universe was only another example of the colossal but profitable way of reasoning about energy and heat. Doubtless the most monstrous of all these philosophical projects is that of Evolution itself, since it produces the human brain and then tempts its possessor to believe

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that he can transcend and think out the process of which he himself is a product. All of these situations in which we either find or place ourselves tend to make the universe more of a puzzle to be worked out than a problem to be solved.

In dealing with Pragmatism, whose character is indefinite as its forms are various, one finds his attitude is more likely to partake of a like or dislike than an approval or disapproval. It makes an appeal which one can affirm or reject; it does not propose an argument which one can accept as valid or deny as invalid. To do this would be to place it among the intellectualistic systems and provoke the question, "Is Saul also among the prophets?" Hence it is more after the manner of Pragmatism to "sell" us its idea than to show us its validity. Nevertheless, there is a kind of pragmatic logic, as there are individual exponents of its most distinct phases. That which is to be regretted in Pragmatism is that, apparently, it must be thought of and expressed in some special manner, as when questions are regarded in a "pragmatic" sense as they are not considered in any specially "rationalistic" or "empirical" sense. Indeed, in certain cases where the thought is far from being plain or its meaning obvious, a "pragmatic sense" may amount to a "Pickwickian sense."

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In a Pickwickian Sense

The kind of Pragmatism which is most interesting because it is the farthest removed from Intellectualism is that humanistic formulation of the doctrine which indicates the persistence of Protagoras's thought when he insisted that "man was the measure of all things." That sort of thinking we recognize quite clearly as a mental attitude which Socrates tried to keep the Athenian youth from assuming when he insisted upon the necessity of general definitions as the essentials of true thinking. It is to Schiller that we are indebted for the resumption of this anthropic attitude as also for the restatement of its possible claims. In the form of what is called "Humanism," the method in question is less logical than psychological, less rationalistic than popular; it takes into strict account the fact that our thinking is colored, not black and white. It is colored by personal interest, prejudice, preference; so much so that we tend to make the wish the father of the thought. We expect this in theology and politics, but not in science and philosophy.

In the attempt to explain a theory of knowledge which we cannot so readily justify, we may point out that often we speak of one theory as being preferable to another, but what we mean is that the one so preferred is espoused by us per-

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sonally as our view because it seems to be more coherent in itself, or more fully in harmony with the obtainable facts in the case. The preference in such a case is not so much a way of thinking as a manner of speaking. Even when one goes so far as to say, "Of all the definitions of art, the one which I like best is the mimetic one," one really means that the theory as such makes a certain appeal, as that of stability, which is wanting in more modern conceptions of the beautiful. One puts forth his reason rather than his personality in exercising a preference of this sort. Or when one says, "The theory of evolution by insensible variations is not in harmony with my view," he means to say that it is the view which itself rests upon other than personal grounds which he is bringing forward, not the fact that it is his view.

We are inclined naturally to personalize in our philosophy and thus speak of theories as Newtonian, Spinozistic, or Kantian; but we do not uphold these eminent opinions because of any relationship with the men whose names they bear, as tho they might be ancestors of ours, but because these minds have taught us certain propositions which we have come to regard as valid in themselves. All of this, if it be preferential, is indicative of an intellectual choice of opinions. The personal in us or our heroes is subordinate to the philosophical, which is in all and none.

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The Wish Father to the Thought

But our ability to rationalize the views which we have accepted with human enthusiasm may be questioned for a time and in a way by the psychological fact that the process of cognition is not so pure as to yield straight thinking. When psychology was looked upon as "mental science," a kind of idealized cognition was taken for granted. Human volitions and emotions were practically ignored. A rationalist like Descartes regarded the will as only a secondary form of knowledge, and the emotions as things to be subordinated to reason. But, in time, the independence of both volition and emotion came to be recognized, so that what had been called mind was seen to be a mixed affair, wherein the intellect was certainly not solitary, perhaps not supreme. In time, this made room for and gave provocation to a way of thinking in which the effects upon emotion and the results upon volition might be taken into account. This extra-intellectual view of mind is now entertained by Pragmatism.

The naturalistic conception of mind has bred a humanistic way of thinking. We are bound to recognize the psychological fact that mind, as we experience, enjoy and employ it, is not identical with the process of thought which the logician either takes for granted or perfects by a

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painful process of abstraction. Our minds are warm and moist; our thoughts are drawn free-hand; our theories have us in them. But the moment we recognize this psychological fact of the matter, at just that moment we are on our guard. We see that we are prone to pursue preference and feel bias; but instead of yielding to this natural tendency, we can combat or at least make allowance for it as for a sort of personal equation which must be reckoned with in our calculations. We realize that we are human, but just as fully realize that we need not, must not, indulge ourselves in the logic of humanism. Hence it is not what we actually do think but what we believe we should think which becomes our guide. In the constant conflict between the disinterested and desirable, power lies upon the side of the desirable, but authority abides with the disinterested.

In order to experience harmony between the desirable and credible, we should have to be perfect beings in a perfect world. Perhaps in many instances there is something like this accord between wish and thought. When we are dealing with near-by and limited facts of nature, we can change these to suit our will, as is done in building cities to afford us a desirable environment. Where our most petty feelings are concerned, we can check these, as we do when we accept the kind of weather which greets us in

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the morning. But where nature as a whole confronts us, we must bring about a more thorough adjustment, and this must be made by the mind alone. Then we think as we realize we verily should think, willy-nilly. Two major instances of this fundamental readjustment on the part of the human understanding appear in our modern science—in astronomy and biology.

Unfavorable Reports From Science

When, at the inauguration of modern science, the modern man found himself face to face with the astronomy of Copernicus, he was placed in a predicament. The juncture was one of an old way of thinking and a new. But this did not mean merely a conflict between scientific minds such as we seem to have to-day in the academic dispute between those who uphold the gravitational systems of Newton and Einstein, respectively. It meant an inward spiritual strife between the desirable and the credible. Everything in man except his purely theoretical interest was on the side of the older view, which made the earth the stationary center of the skies. Nothing was on the side of the new astronomy but certain mathematical calculations. But in this conflict, the victory was to be on the side of the intellect, which adjusted the mind of man to the rational situation in the skies. But even to this day, it is possible to regret to the point of

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emotional opposition an intellectual notion about things whereby man's home is made inconspicuous beyond words, and man himself, as a creature of earth, insignificant except in his capacity for pure thought. His science of the skies is his only defense against them. His sense of desirability is gratified in none but a purely intellectual manner.

In like manner, as tho the degradation of earth had not been sufficient to destroy man's pride in himself, modern biology deals man another blow when it points out, with no little degree of plausibility, that man himself is so distinctly a product of earth as to be evolved from its lower orders of life. Darwin finished the destructive work which Copernicus had so vigorously begun. The contemporary conflict between Darwinism and "Daytonism" may be viewed pragmatically as a conflict between the credible and the desirable. All that is human and personal within us calls out for a non-evolutionary conception of man's origin and nature; all that is rational within him affirms the undesirable, depressing view. In vain do we appeal to a feeble sense of futurism and meliorism which is supposed to cheer us with the faint thought that, in the far-flung future, the human race will profit by the natural arrangement whereby man and all that is human about him will realize a perfection at present undreamed of. Meanwhile we

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can only regret the evolutionary idea, try to safeguard our rationalistic ideas from its insidious influence, and accept it only for conscience' sake as the most rational view within the present grasp of the intellect.

We can realize that we are all Pragmatists by nature, Rationalists by adoption. If the advocate of the all-too-human view of knowledge accuses Rationalism of using the bed of Procrustes into which man must be fitted by force, the defender of Rationalism may retort that Pragmatism is using the lamp of Aladdin to render the desirable credible and real. As far as Intellectualism in general may justly credit the claims of this humanistic view, it may allow the ethical to become a factor in what otherwise would be a purely rational way of thinking; but even then the ethical must be regarded as of itself so rational as to be akin to the reasoning process itself, as was the case with Plato and Aristotle, Spinoza and Kant. A utilitarian theory of knowledge can only act as perniciously as a utilitarian theory of morals.

Pragmatism as a Religion

The spiritual conception of Pragmatism extends and purifies that of the humanistic, of which one, for all his general appreciation of it, is likely to feel ashamed. The difference between the spiritual and humanistic methods of

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reasoning from experience to consequences is implied by the very terms used. They suggest that, in the case of the spiritualistic mode of procedure, it is no longer the private and personal in humanity which should attempt to make itself the measure of things, but the essence of humanity as both the sum total of all human beings and that ideal of human life which man entertains about both himself and the order to which he belongs. Almost every one can distinguish between himself in the temperamental sense of that term and his selfhood, which is the implicit norm or ideal of his rational and moral nature. When this speaks, as tho the soul were expressing itself, its voice is worth heeding.

This quality of Pragmatism is discernible primarily in the great religionists, who put forth the "enormous claims" of the soul even when they must thereby advance their "monstrous hypotheses," which are essentially those of the soul itself and God. This attitude was expressed by St. Augustine in his memorable words, "Thou, O God, hast created us for thyself, and our hearts cannot rest until they rest in thee." It appears again in Pascal's utterance, "The heart has arguments which the understanding knows nothing about." It enters Pragmatism with William James in the form of "The Will to Believe." When it becomes a method of knowing, it shows itself to possess certain analogies

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to reason from which in most ways it is distinct if not contrary. Like reason, this humanistic principle is co-extensive with human nature. It is for one and all, once and forever. It seeks to set aside private feeling almost as fully as Rationalism would eliminate mere opinion. It is in the philosophic mood if not the attitude.

In the case of James, who is the most eminent expounder of such spiritual Pragmatism, the method is applied at a juncture in thought instead of being used, like Rationalism or Empiricism, to deduce conclusions or form hypotheses. James knew his Intellectualism and Naturalism and realized how, in one's most critical moments, they might fail him. When, therefore, he was confronted by a cogent argument of an idealistic character and an equally consistent one offered by materialism, he reserved the right to make the idealistic choice on the ground that it "made a difference" or was more harmonious with human happiness. This was, of course, what Kant had in mind when he referred to the moral interest which reason has in the conflict of its speculative ideas. It is then, in such an emergency, that the wish may claim paternity of the thought; it may take up in an ethical manner the argument which metaphysics abandoned.

There can be little doubt that the ideals of reason are often served by the interests of the will and emotions. That which we believe ought

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to be can well harmonize with what we think is. The difference will consist in the respective moods in which the ideas are pursued, as also in the different methods which are followed toward similar goals. The spiritual nature of man urges itself outward toward a conception of Godhead, which may range from an indefinite Pantheism to a fully personalized Theism. In analogous manner, philosophy, at any rate in the form of Idealism, may as thoroughly pursue the idea of Substance, the Unity of all Things, the Absolute. From this interweaving of interests arises Philosophy of Religion here, the religious philosophy of Absolute Idealism there. Of course, there will be differences of detail, in that the pragmatic believer will incline toward the personal in both himself and his object, while the rationalistic thinker will direct his vision toward the universe and away from man. But there is more likeness than difference between these two ways of adjusting the mind to the world.

Are God and the Soul Desirable?

But in the course of time, these two methods will have to separate and agree to disagree. Spiritual Pragmatism in the special form of religion will not always keep itself free from the all-too-human; rationalistic philosophy cannot forever dwell on the ideas of God and the soul. They meet at their respective heights, but

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when they descend it is to different levels and foreign fields. As for the soul and God, they are true ideas or false, and reason must decide. In the case of a St. Augustine, a Pascal, a James, the profundity of emotion may be sufficient to have these men feel their way to the spiritual order which others have to establish by intellectual means. Then, further, it is quite possible that to some the ideas of God and the soul may appear desirable beliefs, to others undesirable. In such cases, the breach between the desirable and credible is so great that philosophy must turn away from the softer method of reasoning and devote itself to a more severe one than Pragmatism provides. The failure of the practical value to establish its verity will appear when different classes of men, who have the same process of reasoning, differ in their practical purposes and emotional reactions.

A political radical, who has observed some of the ill effects of established religion, will often be found denying the validity of the ideas in question, because they seem inimical to his revolutionary program. His reasoning is to the effect that religion is harmful, its postulates dangerous to human welfare. For, as long as man is led to believe in a Divine Judge who executes righteousness for all that are oppressed, just so long will man refrain from taking into his own hands the human execution of justice. Likewise, he

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reasons, when men believe that in the future life they will be compensated for the evils suffered on earth, they will be less likely to attempt the removal of the evils here and now. In these ways, the ideas of God and soul, instead of bettering human conditions, make them worse. Meant for the consolation of the heart, they act as drugs upon the mind which is thus rendered incapable of clear thinking and forceful action. From the pragmatic viewpoint of the radical, the ideas of God and soul are deemed untrue because they are found undesirable. Thus it is that one who rebels against the established order, if only in spirit, will speak of himself as an "atheist" when his philosophy, far from delving into divine mysteries, has ever confined itself to economic problems and political considerations. In such cases, where Pragmatism acts unfavorably to belief, it becomes necessary to take speculative questions out of humanistic hands and restore them to pure philosophers who are minded to think about them in complete independence of desire or aversion.

To this it might be replied that it is not instinctive religionists, mystical by nature, or political radicals, made morbid by their misfortunes in the State, who are to be taken as criteria of the desirable-credible here, the undesirable-incredible there; but the soul of man as such, with its native aspiration toward the

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spiritual. Such an appeal to the spiritual nature of mankind, free from prejudice and pure in purpose, may make spiritual Pragmatism appear more plausible. For now the soul of man is viewed as expressing that profound and meritorious thing which Spinoza called the intellectual love of God—*amor dei intellectualis*. But the effect of such an appeal, while apparently still pragmatic, is really intellectualistic, since it assumes an emotional attitude, and that a severe one, on the part of one who has already arrived at the ideas of God and soul by other than pragmatic paths, or by ways of pure cognition aiming at the verity of ideas apart from any human values they may result ultimately in having.

Darwinism and Pragmatism

Pragmatism takes on a more scientific form when it turns away from the felt needs of human life to the more realistic demands which that life makes upon the mind when man is considered as a creature of nature. This phase of Pragmatism is represented by John Dewey, who seems to philosophize in the mood of Mill and after the manner of Herbert Spencer. In the case of all three of these men, something other than philosophical interest was at work in connection with their serious speculations about the world. Mill was actuated by economic and

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ethical interests, Spencer by sociology, and Dewey has worked in the interests of education. These interests may account for the practicality of their views. Three different individuals with mathematical, physical and chemical interests in mind, even tho they appreciated the importance of the practical, would hardly have derived Pragmatism from their investigations.

With the three mentioned as "practicalists," there is manifest a marked prejudice in favor of utilitarianism in ethics. When, in the special case of Dewey, this utilitarianism passes over into the field of speculative philosophy, one may question the wisdom of using the same principle over again. The utilitarian is supposed to be an Empiricist in his theoretical philosophy and to leave utility to the affairs of the will, where the idea of practical consequences is more to the point. There can be a utilitarian theory of morals, but not so easily can there be a utilitarian theory of metaphysics or speculative philosophy.

The third and most essential form of Pragmatism may be spoken of as "Evolutionary Pragmatism" to distinguish it from the humanistic and spiritual forms which the doctrine has already received. These three formulations of the pragmatic conception of knowledge indicate degrees of depth in which the doctrine has taken root. It has proceeded, by descent, from what the individual may think to what mankind does

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think, thence to what the mind must think. The wishes of the individual, or of mankind taken individually, do not effect any firm connection between the desirable and credible; the systematic desires of the race as a whole as these are evinced by the historic beliefs of mankind, bring the ideally desirable and theoretically credible nearer together. But the dictate of nature herself, when she insists that we think in terms of actual needs in the struggle for existence, appears to identify intellectual activity with physical necessity. We do not think as we choose or as we deem desirable, but as we are forced to do. First, it is claimed that psychologically we do think in terms of natural exigency; secondly, when we think successfully we arrive at truth logically considered. Now, one might assent to the first proposition on the basis of fact, and dissent from the second on the ground of inadequacy, inconsistency, and irrelevance.

There can be little doubt that, in our usual modes of speaking, we do employ the language of Pragmatism. We may feel that, in referring to ideas, we should confine our vocabulary to the strict terminology of "true" and "false," or words definitely equivalent to them. Just as thoroughly do we realize that we make use of synonyms whose significance may lead us far afield from the straight and narrow path of intellectualistic procedure. But how pedantic,

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how pedagogical to speak with this lips and utter nought but "true" or "false," "correct" or "incorrect!" Life was not made for logic, nor were we placed on our planet just to prove the truth of things. Realizing all this, we liberalize the language of the schools and with our human vernacular express philosophical views in popular terms. In so doing, we hesitate not to wander over into the fields of goodness, beauty, utility, what-not, so that our speech may have warmth, our language color, our tone more than usual vitality. We speak of theories as being "good" or "bad." We cite "fine examples" and "neat conceptions"; just as readily do we speak of the "*value of x* " when we mean the numerical equivalent of an alphabetical symbol, and "work out the result" of a problem when we know that we are not working and that there is no result at the end of the intellectual exercise. It is our manner of speaking, and little did we dream that a school of serious logicians would avail themselves of our conventional language. For, in their minds, all this business of working out and being good and resulting is taken as an indication of the notion that "Truth is successful cogitation."

Knowledge Void if Detached

The pragmatic theory of knowledge, which must be appreciated physically before the prag-

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matic theory of truth can be appraised metaphysically, takes hold of its problem seriously when it connects thought with life and the exercise of reason with the exigencies of existence. Most of us associate knowledge with leisure, as in the inactive or preactive period of man's life in school, or in the otherwise idle hours of a busy life. Of course, the child is expected to make use of the knowledge acquired in the preactive years, and the present system of education is emphatic in its insistence upon the connection between learning now and doing then. Of course, there will be some sort of relationship between the knowledge we get outside of the labor-day, whether in night-school, library or home, and the kind of activity pursued per necessity, if only by way of contrast or as a means of relaxation. But the learning, cultural process still maintains an independence of the more laborious program, since we read and think and reason with a certain detachment from active affairs. It is something "cultural," we believe, and as far as it goes it serves to suggest that the knowing process is independent of the doing one.

But the pragmatist will meet our slender argument in favor of detached, disinterested intellection with the stouter contention that the origin of the knowing process in its rigor and vigor was far different from its lighter employment in a period of advanced civilization like

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ours. We enjoy the knowledge which pioneers and parents have made possible for us, but the original acquisition of ideas was not a simple matter of harvesting; for, the fields had first to be tilled. Now, this cultivation of the knowledge field which to-day is so extensive, and this culture of the mind which seems so available, were not always in their present condition, as we know full well. Nature arranged that man develop both sense organs and ideas. Just as life grew up in connection with organic matter, so mind evolved in a physical environment in no wise resembling a world of ideas. In his struggle for existence, man has made use of both physical and mental—of his body and mind—in the act of adaptation to environment, so that he has come to think along the lines of useful action in the world of things. The evolution of his body has been accompanied by the evolution of his brain, and his way of doing things has set the model for his ways of thinking about them.

The mind may appear to be successful in its attempt to think thoughts which have no direct bearing upon the given situation; but such free cogitations, as they seem to be, carry a reminiscence of the real condition of things which were or hint at an equally real situation which will arise. Science, which certainly has an industrial tendency, is bounded by the walls of human action. "What is the essential object of science?"

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inquires Bergson. "It is to enlarge our influence over things. Science may be speculative in its form, disinterested in its immediate ends; in other words we may give it as long a credit as it wants. But however long the day of reckoning may be put off, some time or other the payment must be made. It is always then—in short, practical utility—that science has in view." Bergson speaks here as a Pragmatist, but it will be recalled that he has in reserve an additional system of intuitive knowledge to be used when the mechanistic system of intellectualism yields to a freer conception of the living universe as a whole; hence he can afford to admit that knowledge in the ordinary sense of the term is utilitarian in character. Indeed, he may find it advantageous to his philosophy to stress the limitations which appear to beset the intellect when, having served the body, it seeks to exercise and enjoy some vision of its own.

Light Without Heat

The major consideration in the controversy between Intellectualist and Pragmatist concerns itself with Evolution in its relation to knowledge; more definitely, knowledge in the form of an intelligence common to men and beasts. As long as philosophy is content to identify intellect with intelligence, just so long will it be satisfied with the evolutionary conception of

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Useful activities along the lines of industry finally produce the science of economics. Art yields esthetics, medicine biology, practise theory.

Pandora's Box

The picture thus presented is that of nature producing a creature forced to struggle for existence and then gradually equipping it with the instrument of intelligence to facilitate the struggle to the point of success, only to witness this creature transcending the whole natural order by means of an intellect which is now examining, criticizing and passing judgment upon the whole. Pandora's box has been opened and the earth is now covered with writhing witnesses to the independence of mind. But this mere matter of fact is not the same as the logical account of it whereby philosophy, not content with paradox, is expected to present an explanation. This is no simple matter, since it requires the mind to free itself from its usual activity, which is with the things of the world, and to devote itself both to its own nature and to that of matter in their totality. The way in which the discussion is conducted consists in inquiring whether the mind, which was created by nature to be a part of nature, can comprehend nature. The principles involved are those of whole and part, whence it is assumed that, as

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the part cannot equal the whole, it cannot grasp it. Assuming that this is a valid way of reasoning, we may state the matter in three different ways.

We may contend that, since the mind is a part of the whole, it cannot, does not, compass in thought—still less understand—the whole; which would land us in a species of agnosticism. Or with the same major premise in mind, we may insist that the mind does think and know the whole, hence it is not a part of the process of nature. This would lead us to a form of absolutism. But both of these conclusions, for all their mutual contradiction, proceed from the same supposition—that the part cannot comprehend the whole any better than it can equal it. Now, it is possible to start from still another point of view and thus assume that the part can comprehend the whole. The eye can vision a certain portion of the landscape where it cannot at the same moment see the whole, and can then obtain other visions to sum them up in the form of a complete view. In like manner can the will adapt itself actively to one phase of its work, and thence proceed to the others in turn, until the operation is complete. In this fashion, it might be reasoned that the intellect, too, altho just as much a *part of things as sense and volition*, can apply itself to the parts of the total process until the whole is known.

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In all three cases, it will be observed that the possibility of thinking the whole order of nature of which man is considered a part is really not impugned. Both Darwin and Bergson, who have made much of the part-whole predicament, succeeded in gaining insight into the whole natural order even when their conceptions of it, as the origin of the human mind, seemed to render this impossible. Darwin did this in his theory of evolution, which was of a most comprehensive character; Bergson does it with his theory of knowledge as intuition. Apparently, when they refer to "mind," they view it in only its practical function; but when they themselves make use of mind's powers they find it possible to think that which in the first instance they had declared unthinkable. For, both alike produce views of nature as a whole, as nature is understood by them.

In the case of the absolutistic Rationalist, who takes it for granted that the mind which has created philosophy and science enjoys the total vision, there is no original admission that the mind is a part of nature; hence there is no philosophical problem, altho there is the question whether the rationalist is correct in assuming that the mind is not a part of nature. The rationalist of this sort is so impressed with the theoretical possibilities of purely reflective knowledge that he refuses to dally with the

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problems of sheer naturalism. In the instance of the realistic mind, which has interests in both nature and reason, the assumption is made that the fractional mind comes at last to think, if not to know, the integral world. Now, much depends upon how seriously philosophy is willing to indulge the idea of part-and-whole, which seems to belong to mathematics rather than metaphysics.

When, then, we pay stricter attention to language, we realize that there is only a suggestion of sense in the expression, "the mind is a part of nature." When nature is examined for its own sake for the purpose of finding out what it is like, it does not encourage any principle of division which makes the mind a "part," or one thing among others. The only kind of division which has the effect of placing mind in any sort of partition is the dichotomous one represented by the ancient "Tree of Porphyry" or the dualistic scheme of Descartes. This method of division has the effect of making mind a part of nature only in the sense that it is "half," which for all its improvement upon the loose idea of partition is still over-mathematical and misleading. At the same time, it does not express the practical conceptions of Pragmatism, since it ignores the idea that the active mind is an instrument to be applied to an end of some

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sort. The question, then, is one of the instrumental, not the fractional, mind.

Philosophical Instruments

But are the demands of knowledge, which consist in some sort of relationship between thoughts and things, any better met by using a mechanical analogy in place of a mathematical form? Or is it clear what is meant by the term "instrument" when it is applied to the knowing process? On this point, Bergson is far more definite than Dewey, since Bergson, thinking perhaps of the "intuition" he has in reserve, does not hesitate to call an instrument an instrument in the definite form of a stone hatchet or stone hammer. With the appearance of these in the life of the race, we find the first appearance of man himself. The purpose of such instruments was, of course, practical. The geometrical knowledge which came later with the wider use of instruments was not the immediate motive for the manufacture of the significant implement.

When, therefore, the Pragmatist speaks of knowledge as an instrument, he is using figurative, illustrative language. Things are instruments in the way that ideas or mental processes generally are not. When we use such expressions, we must make mental corrections. When physics was called "natural philosophy," the

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appliances used in the laboratories were referred to as "philosophical instruments"; but these were recognized as mechanisms totally distinct from the minds which directed their use by the hand. The "philosophical instruments" of Pragmatism are of a different and more dubious sort. They are referred to as "instruments," but in reality they are "methods" which bear analogy to the methods of Rationalism and Empiricism.

Now, the characteristic thing about both Rationalism and Empiricism was their desire to pass as rapidly as possible from the realm of given facts, whether of a psychological or physical nature, to the realm of truth in its logical form. The same general tendency appears with Pragmatism, altho this theory of knowledge tarries much longer in the neighborhood of the psychological and physical situation, doubtless with the intention of showing that the adjustment of the mind to its various objects is far more complicated and intense than either Rationalist or Empiricist had realized. For they had thought it sufficient to consider the mind as picturing the world from within or copying it from without, when the mind, apparently, gets its insight by working upon the world with its mental instruments. The pragmatic mind "makes" its ideas; it seems also to "make" its truths. A theory of knowledge now becomes a theory of truth; its psychology emerges into logic; its

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way of amplifying the traditional character of the thought process suggests that it is now in a position to offer a new criterion of truth.

For the sake of argument, or for the sake of avoiding argument, we may admit that Pragmatism has contributed to the psychology of cognition. It may be found, further, to have added a criterion of true thinking, if not a new law of thought, altho that is a different question. In spite of the influence of psychology, which has done wonders in revealing the sources of human thinking, we must still distinguish between the origin of an idea and its ground. One is found by going back into the chronological order, the other by descending into the logical one. Does our human knowledge carry on with such force that it passes from the psychological realm of fact to the logical order of truth? Does the way we use an idea indicate its real significance?

All this might seem to mean no more than an academic conflict between psychologists and logicians, or it might even be regarded as a matter of taste in philosophical thinking. But the critical mind will at least appreciate the difference between the intellectualistic and anti-intellectualistic appreciation of the truth; the difference between the employment of knowledge as a power which manipulates ideas as it handles objects and the use of knowledge to arrange ideas in conformity with objects or in some in-

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wardly coherent manner. It may be admitted that ideas, no longer the subject of academic contemplation or scholastic dispute, fulfil a practical function, play a part, and produce results. Applied science shows that beyond all possibility of doubt.

Utility and Verity

But how fully are we to emphasize the practical possibilities of ideas when we turn from the uses to which they may be put to the truths which they further signify? May we make a long story short, and thus avoid a journey around Robin Hood's barn, by saying the utility is the verity? This, at any rate, is something so like that which the Pragmatist does, that we may deal with him as a philosophical utilitarian of some sort, but doubtless the most critical and refined. Science tends to encourage him in his utilitarianism when it makes use of definitions framed in terms of how metals, gases and the like can be used, or for what scientific purpose they are useful when experiments are being performed.

But the kind of "utility" which science employs is such as to facilitate an experiment which will lead to a form of knowledge in which utility plays no part. The "use" in question is a mental one no more pragmatic than the use of the minor premise in a syllogism. Indeed, logic

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itself does not hesitate to employ a certain sort of intellectual "utilitarianism" when it "uses" abstraction to form concepts, "employs" judgments to connect concepts, "applies" the rules of the syllogism to test conclusions, "makes use" of hypotheses to form theories, and so forth. But these are clear and convenient ways of speaking, not cogent ways of reasoning; the reasoning in question has nothing to do with the suggestion of utility in the thought process involved. When we pass over into the field of practise, we observe that ideas work out in material form pretty much as they do in theory, and thus give a practical demonstration of the soundness of the reasoning employed. But in such cases, the idea works because it is true; it is not true because it works. We are gratified when we see how cogent ideas turn out successfully, but in such cases we obtain only a practical corroboration of what had itself been established on grounds independent of any fruitful results.

Once we have the intellect, we can use it as an instrument and may thus feel that verity amounts to no more than utility. In many human concerns, there is a balance between useful and true, but that is due in some measure to the fact that man has tacitly agreed within himself to consider the useful in a definite circumstance the same as that which is true in the case. But

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there may be instances where the useful is not true and the true not useful, just as there are cases where the amount of utility, so to speak, is not at all consistent with the amount of truth. We get more out of our little terrestrial truths than is forthcoming from our large celestial ones, whose "cash value," to use an expression of James, is exceedingly small.

It is only a bold philosophy which would pronounce its own system true and the rival one false, for seldom does there arise a sharp disjunction whereby the thinker can mark one side correct, the other incorrect. Certainly an enlightened Rationalism would not speak of Empiricism as being false, nor would Empiricism adopt such a strident attitude toward its rival. Each in its own way would be satisfied to indicate a greater degree of adequacy. But when Rationalism and Empiricism in the full form of Intellectualism oppose Pragmatism, they may deny its claims to validity and accuse it of false logic. In so doing, Intellectualism will have to use its own criteria of truth—which are those of correspondence of idea with fact or coherence of idea with idea—and say nothing about the usefulness of the ideas in question. Pragmatism may attempt to defend itself by insisting, on its own authority, upon the utility of the ideas which it upholds and of the utilitarian theory which advances them.

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Thus the controversy might seem to promise no more than a deadlock in which each party proceeds to its point on the basis of different standards of truth. But there would still be a marked difference in the mode of procedure, in that the Pragmatist would be found insisting that what he has found to be a useful idea is likewise a true idea, while the Intellectualist would have to bear only that burden of proof involved in the obvious notion that what is shown to be a true idea is a true idea, no less and no more. This controversy, however, between those who insist that the useful is also the veritable and those who claim only that the veritable is the veritable, will appear clearer and capable of a more critical solution when certain significant problems are taken up.

The Fruitful Tree of Knowledge

In dealing with geometrical questions, which are suited alike to action and thought, we may take the axiom that a straight line is the shortest distance between two points. But when we as sphere-dwellers consider this philosophically, we are compelled to say that what holds true in practise will not be found true in thought, since the straight line is not the shortest distance between two points. Or we may indulge common perception and habitual action and thus allow that the earth is stationary, which is both a use-

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ful and false idea of the earth. In like manner, we may treat gravitation as a force, which will be necessary in the act of building where a contrary force will have to be employed to meet it; but from this practical attitude assumed by the will we have no proof of any such conception on the part of the intellect. Again we have the useful fiction. Or we may point out that the caloric theory of heat, which physics has discarded in favor of a dynamic conception, is still useful in producing and using heat as a force, and may add that useful practise need not concern itself about the ideas it is using with such success.

With a more elaborate notion like that of the conservation of energy, it is useful to assume that the same amount of energy is conserved in the transference from one form to another. But the scientific situation is one in which there is only an equivalent amount, due to the fact that the methods of measurement have been adopted in such a way as to keep up the supposed balance. The principle of conservation is useful, but in its practical form is not true. Just as useful but incredible is it to assume immutability of species; just as inconvenient to proceed practically upon the theoretical basis of transformism. As long as the mind was confronted by nothing but the kind of thinking which necessity forced upon the will, just so long was man satisfied with fictitious but practically

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fruitful notions. It was only when purely scientific curiosity took possession that the way toward a true view of things was opened to him. Even in the presence of the advances of theoretical science, most of us can work along successfully with the myths of pseudo-science. It makes no difference to us, within the narrow range of our human will as the field of thought, what style of geometry or what kind of physics or what school of biology is the most cogent. These things must be taken up in cool moments when none of the exigencies of action are so involved as to produce bias or tolerate inadequacy.

The usual procedure of the mind is such as to generate useful beliefs and discover real truths; but these two are to be kept apart if we are to avoid error and abhor fiction. This separation, however, is one which the Pragmatist seems unwilling to make; indeed, it is a question whether his method permits of a distinction so sharp. He does distinguish between mere belief as something unverified and true belief in the sense of the idea which is found to work successfully and hence is called "true." But, as there is a difference between invention and discovery, so there is a distinction between made beliefs and truths which are found. The Pragmatist may not wholly assert that "truths" are made, but still he cannot admit that they are merely found by the passive intellect. He will

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have to assume that the mind in its activity has some sort of influence over both beliefs and truths, while most of us are inclined to assume that the power of the mind is limited to those sentiments which keep within its private borders. If the Pragmatist insists that the power of the mind permits it to make something more substantial than beliefs, we can only conclude that these products are not verities, but only verisimilitudes. They take the place of truths when truths cannot be found, since they serve in the capacity of working hypotheses. They serve the immediate interests of the will, which must act before the truth can be discovered. We are all Pragmatists because we cannot help ourselves, but philosophy is an endeavor to escape from the pragmatic situation.

THE CRITERIA OF TRUTH

To the lay mind, philosophy often seems to be so enamored of its special methods that it is inclined to ignore the major issue—the truth of things. In reply to this implicit criticism, philosophy would suggest that there is something sophomoric in the bland assertion that the aim of philosophy is truth. Such verism, while it rejoices in a sound spirit, overlooks the complexity of the truth situation and does not consider what kind of truth is sought or how this is to be obtained, since there are many truths, not

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one of which can be had for the asking. Nevertheless, the popular mind has a right to call philosophy to account and demand that it depart from pure technique long enough to raise the question concerning that truth without which all speculation will be only a scholastic play of ideas.

The Philosopher's Stone

That which philosophy can supply is a Criterion of Truth. It must leave to physics the problem of particular truths about matter, to psychology the definite facts of mind, and to science generally the truths about both nature and man. Such particular verities and the theories which embrace them do not belong to philosophy as such. All that philosophy can do is to introduce and conclude an extended investigation, of which science occupies and operates within the middle part. If philosophy can perfect a true method of thinking about things and thoughts, it will have accomplished nearly all that we have a right to expect of it—all that it has a right to attempt. Such moderation on the part of philosophy must not be taken to mean, however, that philosophy is shunning difficulty or shirking responsibility; it means only that philosophy is confining itself to the field of thought which furnishes it with its proper subject-matter.

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But when philosophy encounters the problem of truth, while it avoids the discussion of particular examples of the true, it is far from being so detached as to neglect the problem of truth as such, which it takes up definitely in the form of "The Criteria of Truth." Now, these are not superadded to the Methods of Knowing, but follow as logical consequences when those methods are carried out to a point of philosophical finality. Hence, there will be as many forms and kinds of criteria of true thinking as there are methods of thought. Accordingly, we shall meet rationalistic and empirical, mystical and pragmatic truth-criteria. But we shall not be so fortunate, perhaps, as to observe four different sides of one and the same solid Truth as such. Indeed, it is doubtful whether philosophy can expect and aspire to discover a tremendous substance which it may securely define as "The Truth." More likely is it that philosophy will discover some touchstone which will serve to reveal the presence of truth as a quality of ideas, whence it may use the adjective "true" in the form of "true ideas," "true beliefs," "true theories," and the like.

How Truths Hang Together

The Rationalistic Criterion of Truth is that of Coherence. When such a semi-physical term is used, it is meant to indicate nothing other than

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what was implied at the beginning when philosophy was identified with "thought," and thought with the ideas which belong together instead of those which simply go together. The coherential ideal is thus something which proceeds directly from the thought process instead of toward some remote realm for its standard. The act or condition of "belonging together," which constitutes thought and determines its verity, may be understood as consistency, inward agreement and the like. A definition is called true when the qualities which are attributed to a thing are found to belong there; as when matter is defined as an atomic thing, heat as something dynamic, animality as a locomotive organization of matter. A judgment is called true when the proper predicate is connected with a subject, as ductility with metal, consciousness with mind, and the ability to create organic matter out of mineral elements with vegetable. A conclusion is true when it follows from the true premises which have been found in judgments. A true cause is found when there is coherence among all the circumstances in which, as a phenomenon, it appears; as there is not this coherence in the circumstances when its failure to appear is noteworthy. Hence, definitions and judgments, inferences and theories, while they may suggest other criteria of

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truth, are declared true when they cohere, idea with idea. They cannot be true and incoherent.

The Facts in the Case

When the rationalist speaks of "The Truth," he has in mind something which is superior to the extreme of being absolute; it is independent of the particular thoughts which the individual mind may entertain in the form of opinion, just as independent of particular things which that mind perceives. The true view of things will thus be Olympian in character, and if, as Aristotle suggested, "the energy of the gods is one apt for contemplative speculation," the results of that energy will be the exercise of true knowledge. But is man in anything like an Olympian position when, as Evolution suggests, his mind is a part of the general evolution? There is no doubt that he thinks, but it is not so certain that he thinks truly; no question about his having knowledge, but a question whether he has true knowledge. But, one might ask, how can there be "thought" when it is not "true thought"? Still more seriously, how can there be "knowledge" when it is not "true knowledge"? Rationalism answers these questions at once by saying, true thinking means more than having the right idea in mind; true knowing signifies something more than having the object to be known right before one's eyes. True thought and

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knowledge are dependent upon that which is universal in scope, necessary in character. The true idea, as that about the hypotenuse of a right triangle, is one which must hold everywhere.

As soon as we lift truth from the private thoughts of the mind and the particular facts of the world and place it in a kind of Olympian order, we are confronted by a difficulty. This "truth," which is coherent enough in itself, may not fit the facts as these are found in experience, so that we should have on our hands a conception of things which was not actual, altho true. In addition to this difficulty inherent upon the elevation of truth above existence, there might be more than one movement upward toward the Olympus, on whose summit would be found the "truths" which had come up by different paths. Or, the truth situation would be like the North Pole, where east and west, north and south are all alike.

It is natural to suppose that there is only one plan of ideas which is to be called the true one. The fact of the matter is that there are competitive conceptions of what is true in the world. When Rationalism is confronted by rival systems of speculation, it is not easy to exercise the wisdom of Solomon. At the same time, a false theory explodes in time; an imperfect one wears out. The false one arose when man's mind ig-

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nored the significant facts in the case, as in myths; the imperfect one dwindled away because the number of facts to sustain it was not sufficiently inclusive. As examples of worn-out "truths," we may cite the familiar cases of geocentric astronomy and the caloric theory of heat. These conceptions of their respective fields were finally overcome by the introduction of additional facts, or more intensive views of the old ones. We have the "truth" about the earth and heat in a way in which old thinkers did not possess it. But, it will be observed, the addition of facts produces something more than a larger amount of evidence; it produces a more coherent theory of those facts. We have a better view rather than a bigger one; our gain is qualitative in spite of its quantitative form.

If we are not in a position to determine which of the competitive conceptions is the better and hence truer one, we can escape from the difficulty by an appeal to futurism and thus say: "We cannot tell now which is the true view in the case, but our children will be in a position to decide, for time will tell." This might appear to be a lame excuse for not proving truth by means of coherence, but as a matter of fact it is just what the human mind, in its pathetic lack of omniscience, has had to do. It has waited and availed itself of the temporal test of time-will-tell. That which the mind has reason to expect is

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a greater degree of coherence—finer and finer truths, rather than more and more of them.

Now, the human mind in its finitude is rarely embarrassed by the richness of its ideas, but there are instances where it possesses more thought material than it can use in forming truths. A suggestion of this overfulness might be found in the well-known, oft-cited example of the square on the hypotenuse on which Pythagoras based geometrical knowledge. He passed from a truth by observation to a truth by demonstration and gave Euclid a geometrical proposition. But now we have perhaps a score of proofs of the same proposition, or just so many coherent patterns of one and the same geometrical idea. In this case, however, the different proofs of the same proposition are not competitive but corroborative; they do not rival but reinforce one another. For all their variety, they do not confuse the mind or threaten its standard of truth by coherence. Indeed, one might suggest that the same number in simple arithmetic can be obtained by a slow process of addition or by the more rapid one of multiplication, without fearing that the additive and multiplicative are at all dangerous rivals for the crown of verity.

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The Roads to Rome

But where we are dealing not merely with different views of the same proposition in the same kind of geometry or arithmetic, but with different and contrary conceptions of mathematical science, the coherential theory of verity is not so easily maintained. The lay mind, which had difficulty enough with the standard propositions of Euclidean geometry, encounters something that it finds insurmountable when rival conceptions of the spatial science are put forth. This has been within almost recent memory by such supergeometers as Lobachevsky and Riemann. We can see where they started, but have no idea where they will end with their startling reasonings. Both considered Euclid's solid axiom that parallel lines are to be thought of pretty much as they appear, so that through a point outside a line only one parallel line can be drawn. Instead of suggesting that an additional parallel might be drawn, these radical geometers went to the extreme of assuming, in the one case, that an infinite number of such parallels might be drawn; in the other case, that there could be drawn no parallel line at all. This is indeed embarrassing for the lay mind, which cannot understand how the number of parallel lines in the case can ascend from one in number to infinity or descend in like manner to zero. What

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can one think about his spatial world? What can one think at the present time, when the engaging theory of relativity is based upon one of these exorbitant conceptions of space and matter—that of Riemann?

One can simply balk at these extravagant notions and then settle back upon his world of experience, the existent world, and prepare to receive that kind of geometry which adapts itself to the perceptible order. That is, one can be empirical and set about framing an empirical criterion of truth. Or he can assume that, as these special and superior systems of geometry are in themselves self-consistent, where they are far from being self-evident, they represent no more nor less than the ideal of coherency on a large scale. Consistent with themselves in particular, they may be thought of as generally consistent with one another in an abstract order which interests our thought in a way that it cannot engage our action. We live and act in a Euclidean world, and the very term "geometry," or "earth-measure," is significant of that; we may consider the larger order of celestial reality in its extent and intricacy as something to be thought of more coherently in terms of a supergeometrical science. We have grown accustomed to a Copernican view of the solar system in spite of the fact that our senses contradict it; we can grow used to the super-Eu-

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clidean conception of the space in which our homely ideas of straight lines and parallels have no ultimate meaning.

But in yielding so much to the abstract ideal of Coherence, we realize that the better it is in theory the worse in practise. It is authentic to the point of being absolute in authority in mathematics and logic, but in these cases the coherence begins only after an assumption has been made. The result is that perfect coherence among ideas signifies that these are based upon an assumption of some sort, whence the truth in the case is of a hypothetical character. If only one parallel line can be drawn, if all men are mortal, then follow in due order a mundane order and a race of mortal men. Make a different assumption, and your lines of coherence, while still just as straight, lead in a different direction. The certainty, therefore, which we gather is the certainty of inference from some given point taken as the basis of calculation. When we want the certainty of actuality, we must turn from Rationalism to Empiricism.

Truth by Correspondence

The Empirical Criterion of Truth is that of Correspondence, the correspondence between the idea in the mind and the object outside it. This does not immediately and automatically make clear just what is meant by "correspon-

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dence," whether by a process of copying or less definitely by referring to; still less does it indicate the manner in which the correspondence is carried on. The term, "correspondence," which is thus in itself non-committal, is further misleading in that it appears to indicate a kind of balance between the two principles in the knowing relation when, as a matter of fact, the empirical mode of procedure is such as to place the emphasis on the outside, with things; "the mind gets its knowledge and adopts its standard of truth by copying or imitating, relating or referring to these things of the world. But, in spite of these preliminary scruples, Empiricism has no more difficulty in setting up a standard of truth than it had in establishing a process of knowledge. In both instances, it appears to have common sense on its side.

Common sense has no doubt that there is a vast difference between a set of ideas which cohere quite smoothly in a dream and another set of ideas which, for all the roughness they may have, adapt themselves to the world, adjust themselves to the past, apparently follow the analogy of other people's experience, and can be acted upon. This frank state of affairs within one's mind, being open on all sides, rich, public and practical, has all the marks of a real experience and appeals to the mind as something true. Its various correspondences authenticate

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its verity. We verily feel that there is a difference between imagining and perceiving; that after harboring an idea for a time, we are coming closer to truth by allowing it to be dispelled by another idea having a perceptual form and practical character. We can do something with an idea of that sort, and can depend upon it. Now, this is the spirit of correspondence. It would seem to be so obvious as to render discussion and defense unnecessary, which is the case indeed when we are considering the psychological situation in perception, but not so convincingly the situation when we inquire concerning the truth of things, or the truth of our ideas of them. Doubts are bound to rise when we follow the analogy of common sense perception, hence we are not wholly certain that the truth of things can be "shown" in any simple way.

The extent of the actual world is such that we are forced to wonder how our contact with it and the correspondence of our ideas to it can give us the true situation in nature. For the world, as we have come to know it in science, is something so macroscopic in one way and microscopic in another that no process of sensing or experiencing is possible. It includes stars which are beyond the ken of eye and telescope, just as it is constituted by elements which elude sharp vision and the microscope. These are not perceived, experienced things, and yet they

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seem to be the real things in our world. We may obviate the difficulty for the time, or in a way, by shifting our mode of expression from the actual to the possible. We can say, then, that the realities of the "infinite" and "infinitesimal" are perceptible, experienceable. If our organs and instruments were as good as our brains, we should experience the things which now we enjoy chiefly by some mental process, like calculation. The world with which our ideas are supposed to correspond, does more than expand and contract in these disconcerting ways. It is as free with time as it has just been seen to be with space. This fact tends to cloud the title of empiricism when it lays claim to a truth-criterion.

For, Empiricism exists and operates in the present; its norm of correspondence is something which applies here and now. The larger and more fully rationalized experience of science, however, includes the existence of stars whose light is still to greet our eyes—also of starlight from celestial bodies no longer existent—so that the idea of a correspondence between our ideas and those things must be amended. This act may result in rendering the norm of correspondence a kind of mental coherence between one set of ideas, framed in connection with the scientific status of the star, and another which has to do with our present apprehension of it. Further, in dealing with organisms as

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things evolved from simpler forms, empirical correspondence must deal with the settled type of plant or animal which now is, when the complete—and true—status of these things is something historical. The past of an organism may be rolled up behind and somehow included in it, but our ideas about it do not fully correspond with the historical situation therein involved. If we could spread out the celestial order, just as its stars appear to be spread out in the firmament, and thus do away with time; if we could unroll the organic world and have it before us like a film, we should be able to witness a correspondence of thoughts and things which, as it is now, is only partial and suggestive, not full and convincing.

The Way Things Are

In addition to these considerations drawn simply from time and space, there are other doubts which will arise to taint the truthfulness of the correspondential criterion. To have and use this at all, we must revise it in such ways as to determine just what thought shall correspond with just what thing. For the course of nature is such as to put forward, if not flaunt, phenomena which have no direct bearing upon the actual situation in the outer world. The conduct of the mind is equally prone to make prominent impressions that have little or no bearing

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upon the attitude which the mind should assume. Nature impresses the mind with the apparent importance of what is seen and heard and touched—the color, tone and texture of things—which gives the “psychology” of things, but not their physical nature. These constitute a realm of so-called “secondary qualities” which have always gratified man, but which, nevertheless, had to be banished by modern science when it sought the essential reality of things in mass, movement and structure as the “primary qualities” of things. Empiricism is not slow to make this scientific revision, but in so doing it appears to abandon its criterion of correspondence, for correspondence of thoughts and things is concerned chiefly with the natural mind of psychology and the “secondary” qualities of things. When another kind or degree of “correspondence” is adopted, it is so marked by logical assumptions that the criterion employed suggests the criterion of coherence.

After things have been scanned to such a degree that we have become prepared to institute a kind of correspondence between them and the ideas which endeavor to grasp them, we are annoyed a second time by the fact that there are relations between them. To have things merely as points would be to miss the plan of the world. To indicate them as notes would fail to produce the harmony. For the universe is a network

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of relations, so that individual correspondences here and there can give us only the knots which, for all their significance, cannot obviate the necessity of dealing with the connecting strands. An empiricism of that sort, while it might yield the clear representation of "things" in particular, can end only in scientific skepticism, as it did with Hume. Empiricism realizes that, hence it makes use of the "Canons of Induction" for the purpose of finding causal connections which do not lie upon the surface of experience but must be isolated by means of thought, as tho the procedure were a sort of rationalism over again. When this inductive process of filtering has been carried out, "correspondence" may begin, but not before.

When these particular, local relations between things, as that of friction and heat, have been adjusted by inductive criticism, the question concerning the larger relation between whole sets of connections here and others there will arise to aggravate the empirical method of getting truths by a system of correspondence. In the attempt to do this, experience, as well as knowledge generally, is called upon to effect a regressus from present to past, from effect to cause. It is true that the steps actually taken may be retraced and that, in a way, the path thought has followed may be continued as along a dotted line; but not with security. Going for-

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ward, as in a process of reasoning from premises, is a different matter, if not a certain one. When, however, one attempts to reverse the *a posteriori* order, if we may so say, he must yield the idea of certainty. It isn't like reasoning back from four to twice two, since there is no such reversibility with our ideas of natural processes any more than there is with the processes themselves. One may conclude that, if it rains the ground will surely be wet, but he cannot so surely affirm that, if the ground is wet, it has rained, since the wetness may have come about in some other way, as from dew, melted snow, some artificial means or the like. If we could have set out upon a course of reasoning about a thing like Evolution with some certain principle of nature, like "natural selection," "orthogenesis," "the will-to-live," or "the vital thrust" in mind, we might have reasoned downwards through the course of Evolution. But since we meet Evolution under way, to say nothing of the fact that we are one of its effects, we are in no position to reverse matters and thus decide upon its true theory. We must be satisfied to surmise concerning a theory of it, and assume an agnostic position toward it. The world has evolved, but that does not prove that this that or the other thing was the cause of it. No correspondence seems relevant to the actual situation.

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Shadows of Doubt

Just as philosophy is at the point of setting up a system of Skepticism, it occurs to the philosophical mind that, in thinking about things, we should not expect the same certainty as in the case of thinking about thoughts. There is such certainty in the application of the rationalistic criterion of truth, but, confined as it is to logical and mathematical forms, it cannot yield the satisfaction which is bound to come when the mind is dealing with the things of the world. When this kind of thinking, which is realistic, is in operation, the mind can expect only a high degree of probability. This, however, is far removed from philosophical skepticism, since it assumes a favorable attitude toward knowledge and keeps progressing toward more perfect probability. In like manner, such probabilism is not calculated to encourage Pragmatism, since it follows the line of correspondence between thoughts and things instead of considering the practical consequences which come about when thought applies itself to action on things.

Skepticism itself is not the simplest, easiest position to take with the problem of knowledge, but the most complicated and difficult. The skeptic must first exhaust all the possibilities of knowledge afforded by Rationalism and Empiri-

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cism and then attempt to negate what they have affirmed. Far from being the expression of ignorance, Skepticism more closely resembles omniscience, since it affirms that no knowledge of things, causes and the like is possible. Skepticism is thus negative omniscience. It overlooks the fact that a rationalistic theory of knowledge can be only formal and that an empirical method can lead to no more than probability. When these natural qualifications are taken into account, there can be no doubt that human thought has built up a body of knowledge which, measured here by coherence and there by correspondence, may be called true knowledge.

A Mystical Sense of Truth

The Mystical Criterion of Truth is not easily stated, still less easily subjected to criticism. Nevertheless, common sense and philosophical thought can entertain a certain amount of appreciation of it. All of us know that, when we have ascertained what we believe is the truth in any intellectual transaction, as perceiving an object or obtaining a result in mathematics, we have a feeling of satisfaction which seems something apart from the intellectual operation involved. Even the act of recalling a name will give the mind a definite glow. Now, that which the average person enjoys as something over and above mere perceiving and reasoning is the

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mental factor which the mystical mind will employ on a large scale. But the difficulty with this method of measuring truth is that one must have the truth before one enjoys the truth-feeling. The feeling is the effect, not the cause. It is a passive state of mind calculated to corroborate the idea which we accept as true, but cannot of itself propose a criterion of truth on which we may rely. We may have a "feeling that something is wrong"; or something may "appeal to us as being correct"; but behind these feelings of correctness and incorrectness is the mental process peculiar to rationalism and empiricism.

In like manner, it might be urged that when we find coherence between ideas or correspondence between idea and fact, we register this in the form of an ineffable feeling whose intuitive character assures us that we are in the atmosphere of truth. "This is a tree," or "twice two are four"; after perceiving and reasoning, we believe in our propositions because we feel certain about them. It might seem, then, that the act of attaining truth, whether by experience or by reason, had to be verified by some elementary feeling about the truth in question. But here, again, the truth-feeling comes in only after the stage is set for it; of itself it can do nothing by way of testing truths. If Mysticism had been called upon to decide upon the truth about modern astronomy and evolution, it would have

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inclined to the more comfortable view that the earth is the center of the universe and that man is a distinct species. Even after reason and experience have shown us different truths about our earth and ourselves, we have disquieting feelings which must be overcome by the rigorous logic of thoughts and things. Mysticism tends to make us sympathetic toward true knowledge, but cannot tell us where to find the truth or what the truth should be like when found.

Man as the Measure

Something similar may be said of the Pragmatic Criterion of Truth. Once the truth in a situation, as in astronomy or biology, has been determined, and we have decided to think in that way, Pragmatism, with its boundless optimism, may point out the practical consequences which follow from such a belief. But can Pragmatism lead on in advance of the logical conclusion which reason will draw and anticipate this on the ground that the truth, when otherwise determined, will be in accordance with the fruitful consequences already indicated? In minor matters, the pragmatic method does something like this. Minerals and metals are found to have certain useful qualities in making tools before the structure or nature of those things are known in any scientific way. Certain foods are found beneficial ages before the discovery of vita-

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mins, just as water quenched thirst before it was known to be composed of hydrogen and oxygen. Doubtless there are still many properties of matter and habits of man which reveal practical consequences without our knowing the truth about them. The practical consequence may encourage us to investigate but cannot satisfy the conditions of what we would call truth.

In the two major truths of modern science, to which reference has already been made, we find that theoretical conclusions and practical consequences are quite awry. In the case of Copernican astronomy, the theoretical conclusion from applied mathematics is far from being in accord with the practical consequence—the diminution of man's importance in the total scheme of things, which is far from being humanistic. In the parallel instance of Darwinian biology, the rational trend of things is not in agreement with a desirable belief, since evolution makes for the degradation of mankind. We believe in modern astronomy and modern biology, not because such beliefs are practically favorable and useful, but because we have to. Those who oppose science do so on pragmatic grounds. They find that unfavorable consequences follow from the ultimate pursuit of rationalistic notions. Those who abide by the results of intellectualism and still yearn for the dignity of man attempt to find the lat-

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ter in the mind which has the power to draw circles around the natural order of space and time, matter and motion which would envelop it.

What, Then, Is Truth?

The foregoing discussions of the Criteria of Truth have been sufficient to show that truth is more a quality of ideas or a method of thought than an objective reality, like mind or matter, man or God. The mind may obtain truths about matter just as man may learn the truth about God, but the truth in question is chiefly the spirit and method in which thinking is carried on. As for the criteria themselves, it is not possible to assert that just one of the four criteria is the true one, the others false; nor is it much easier to affirm that one of them is the best test of truth. Much depends upon the subject-matter of the ideas in question, whence a clear idea may not be wholly relevant, or, in the contrary case, an effective notion be clear-cut in the way it states its argument and draws its conclusions. There are different ways of arriving at different ends.

When philosophy has in mind the formal truths of mathematics and logic, the mode of expressing the true relationship is that of the equation or judgment, respectively. This is bound to involve the criterion of coherence. If the richer and more realistic truths of the natu-

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ral sciences are involved, the question of truth becomes one of observed fact and satisfactory theory. This causes philosophy to turn to the criterion of correspondence between thoughts and things so that the true idea in the case is one of actuality rather than clearness. If, however, the subject-matter is one of neither thoughts nor things, but sentiments such as those of art and religion, it is difficult for philosophy to avoid the conclusion that intuition is the only way of obtaining and testing the truth. This brings the mystical criterion to the foreground.

When, finally, our thought passes on from what is clear and actual, beautiful and good, to what is practical and useful, the pragmatic method is in a position to contribute its philosophy. Thus in politics, education, medicine and social science, one would hardly insist upon the criteria of either coherence or correspondence, still less intuition; one would consult the fruitful consequences forthcoming from certain modes of practise. The abstract and fixed forms of thought peculiar to Rationalism and Empiricism may figure to a certain degree, as we see when attempts are made at pure deductions or the application of statistics. But the truth about our human concerns is found in the consequences which result from application of what seem to be appropriate methods. Since the spirit of the

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present age is utilitarian, it is natural, but not necessarily wise, to extol the pragmatic method of testing ideas, and to select as the true ones such as work—even when the ideas now applied were found and tested by intellectualistic methods. Since the true is more a quality of ideas and beliefs than a thing or objective reality, it will be necessary to pass on to the discussion of reality in order to find out what true being means.

III

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IDEALISM

THE culmination of philosophy as a speculative discipline is found in Metaphysics, or theory of reality. As philosophy is understood at the present time, this metaphysical view of things follows directly upon the various methods of knowing with a view to finding the fundamental principles of knowledge. This distinction between knowing and knowledge, which contains the difference between Methodology and Metaphysics, further involves a contrast between the knower and the known. This can be expressed more graphically but less accurately by saying that the distinction in question has to do with the subject and the object of knowledge. As will appear in the forthcoming discussion, there can be a subjective view of reality in the form of Idealism and an objective view of knowledge in the form of Realism, but we gain in clearness if we distinguish the philosophy of thought from the philosophy of things by calling the first subjective, the last objective. When the metaphysical study of things is taken up more constructively, and with less strife between

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These schools of thought, it consists of an analysis of given existence in close connection with physics and psychology. These can give better views of man and nature than are forthcoming from the methods of knowing when these are carried out to their ultimate grounds.

Idealism and Realism

But when the backgrounds of the methods are examined, it will be found that the exponents of Rationalism and Empiricism, to say nothing of the other two theories of knowledge, are of a metaphysical character. The rationalist lays such emphasis upon mind and its forms that he is practically bound to regard things as well as thoughts in a mental way. This will yield Idealism. Similarly, when the Empiricist is found placing the stress upon an outer rather than an inner situation, it is almost evident that he is proceeding from a non-mental, or even material, point of view. The Rationalist relies upon psychology for his conception of the knowing process, the Empiricist upon physics; at any rate, these two contrasted sciences seem to serve as the respective patterns for the rival theories. The results will now begin to appear in the full theories of Idealism and Realism, which embrace both inner and outer situation, the knower and known.

As far as Mysticism and Pragmatism are con-

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cerned, it will be found that these methods of knowing do not so easily expand into systematic views of the world generally, so that it is only by accommodation or even courtesy that we may speak of a "Mystical Metaphysics" or a "Pragmatic Metaphysics." However, the mystical method, while it is far removed from the letter of Rationalism, possesses its spirit, whence Mysticism lends itself to Idealism. In like manner, Pragmatism, which follows a method of its own instead of the empirical one with which it sympathizes, is practically bound to Realism. The result is that philosophy is now confronted with practically two views of reality. Any other which may appear will be found to combine these competitive conceptions. The philosophical meaning of Idealism and Realism must now be considered.

Thoughts and Things

We use the terms, "Idealism" and "Realism," in conventional ways to indicate lofty or low views of an ethical form, as when we refer to an idealistic view of life or a realistic style in literature. We come nearer to the philosophical values of these terms when we use them, as it were, in a spatial manner, to indicate that Realism takes an immediate view of its object or problem, leaving it to Idealism to do what it can with a remote treatment of it. We live in a

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realistic way since we exist and work by direct contact with things, but we can think about them in a distant and derivative manner. Hence, it may be said for the time being that the difference between Idealism and Realism is largely a matter of distance, and what distance itself involves. But when these terms are used in the strict sense of philosophy, the spatial modes of representation, whether of high and low, or of far and near, give way before direct, decisive methods of thinking. Then, Idealism and Realism begin to contrast their definitions of ultimate reality. The result is that, according to Idealism, reality is in some sense mental; it must be spoken of in terms of ideas, and the last account of it is one which is given by thought. According to Realism, reality is not mental, cannot be spoken of in terms of ideas, when these are understood in a psychological way, and must be thought of as independent of mind.

From what has been said of these two forms of analytical metaphysics, it might appear as tho they were upon the same level and exerted the same influence, one being the contrary of the other. The same might be said of the two political parties in the United States, where it is either one or the other which is in control. But just as it is the Republican party which is almost habitually in power, so it is Idealism which has usually dominated in philosophy.

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Hence Realism, like the Democratic party, is kept in a polemical position whence it registers dissent from Idealism and thus tends to assert that reality is non-mental, altho the meaning of "non-mental" is not always made clear. There can be no doubt that Realism to-day, in the academic form of "Neo-Realism," has been of great value in pointing out the haste with which Idealism has proceeded to ultimate reality; but it is a question whether Realism of itself has been able to give an adequate, consistent account of the things which it defends against ideas. Philosophy has always been Idealism of a more or less perfect character, in a more or less consistent form. If it ceased to exist, it is difficult to see how Realism would proceed, since it lives chiefly by polemics. Idealism must now be examined in some detail.

IDEALISM

The moment Idealism as a doctrine is identified with classic names, its principles are more easily recognized. Idealism is that which Plato taught, what was put in a psychological and paradoxical form by Bishop Berkeley, and what was systematized in a most formidable manner by Immanuel Kant. In its ancient form of Platonism, Idealism stood for the intelligibility of things generally. It was formulated by means of an effort which rationalized all existence without

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considering the nature of that which did the rationalizing, or that which was rationalized. Unlike our modern Idealists, Plato analyzed neither the subject nor the object of knowledge, so that he was as innocent of physics as of psychology. In contrast with him, Berkeley and Kant indulged in that analysis, especially on the psychological side, so that they were bound to interpret Idealism in terms of consciousness, or what is thought about things. In addition to their marked tendency to psychologize knowledge, they exhibit another leaning which is not noticed with Plato—the tendency to extract man from the world and then exalt him to a position where his thought becomes magisterial. The man of modern Idealism is thus a Duce, the dictator of all existence.

“Plato Is Philosophy”

Plato was led to assume his idealistic position more from the skepticism of others before him than from any doubts he may have entertained about man's knowledge of reality. He had learned from others that there could be no knowledge when the world was regarded as a flux of particular things. Knowledge could come only as the world was looked upon as a system of permanent universals, which he called Ideas. We think of “ideas” as subjective things which we gather from the world or conjure up within con-

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sciousness, but Plato's Ideas were the fundamentals of existence itself. In default of any such logic as we have had since the days of Aristotle, who followed him, and in the absence of any principles of physical science like those of modern times, Plato was in a position to project a philosophical doctrine which took the place of the logical and physical and which has since been a model for all those who have attempted to analyze the mental and material orders.

„ When Plato refers to the Idea, he seems to have in mind no more nor less than the intelligible principle by means of which a thing becomes a topic for thought. All of us Platonize when we ask, "What's the idea?" whether we are considering the League of Nations, Relativity, Prohibition, or modern music. In a certain sense, the Platonistic Idea is only common sense on a broad scale and deep basis. Plato himself looked upon his Idea as the general principle which produces the type, just as Phidias looked upon various human forms as expressive of the typical regarded from the standpoint of beauty. He considered it, further, as the fundamental principle of thought, or category of Aristotle and Kant. It served him in the capacity of natural law, and as far as he perceived law in nature he reduced it to the Idea. These Ideas, which are the everlasting patterns of visible things, may

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be arranged in a hierarchy ranging through the more general and the more lofty, until we reach the summit of the system, where we find the Idea of the Good. Now, the Good of Plato, unlike the Good of modern ethics, stood for the highest degree of intelligibility. But, since Plato, like Socrates, looked upon the Good Man as the Wise Man, he had no trouble in using the Good where we might be inclined to substitute the Idea of the True.

Like every other philosophy, Plato's Idealism was bound to encounter the actual world, wherein are found the brutal facts of concrete existence as well as the purely human impressions of them which we are fated to entertain. Plato despaired of the situation in which common perception tries to make something out of every-day experience, for that situation was one in which the flux of many things so confused the mind as to make knowledge impossible. Plato must get rid of the ordinary man in his every-day world. He does this by regarding the world of common experience as an illusion. Man in this actual world of things is like a captive in a cave where he is chained with his back to the light and where he can see only the shadows of real things as these are dimly reflected upon the rear wall of his dungeon. He infers the existence of real things in the world of light, but it is not until philosophy enables him to cast off his shackles

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that he is able to perceive the true world, which is the World of Ideas. There he may contemplate the Good and frame the Ideal Republic.

Ideas Are Permanent

But when one who has interests vested in the world of particular, moving things is asked to exchange this for an ideal order, one is likely to inquire concerning the reasons for believing in a World of Ideas. The passage from one to the other is not like the mere act of turning over a rug from the seamy side with all its ugly but useful knots to the serene pattern of the textile. It seems more like the fable of the dog and his shadow, since one appears to be giving up his hold on tangible reality for a possible grasp at a finer but more elusive thing. One can have dealings with this man, John, where he cannot so easily enter into relations with the Idea of Man. He can do something with this particular elm, but cannot work so effectively upon the Idea of Tree. He holds citizenship and receives benefits from an actual government, however poor, but cannot so easily become naturalized in the Ideal Republic. It is natural to hesitate when the World of Ideas is advertised by philosophy, even when it has so much to recommend it.

Plato's supreme contention in favor of the reality of Ideas is that of Permanence. The indi-

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vidual man, who a moment ago appeared so real in his individuality, will pass away; but the type, Man, abides. The particular elm is doomed to decay, but the Idea of Tree, of which the elm was an example, exists forever. The actual State, however solid in its palmy days, becomes a dead empire like Assyria and Babylon, Greece and Rome; but the State Idea persists and furnishes a pattern for future governments. When placed upon the basis of Permanence, Ideas become real beings, while the things and institutions of the experienced world are only pale copies and faint imitations of the true realities which, at first, seemed mere copies of the things seen and touched. These visible, tangible things are the copies of the eternal types which philosophy has discovered. When the classic form of Idealism has been revealed to us, we realize that most of our reflective thinking, most of our rational activity, is of the Platonistic sort. Science substitutes a cosmos of laws for the actual world in its heterogeneity. Religion seeks to impose a spiritual order upon the sensuous one. Art uses esthetic expression to create that which nature only suggests. Moral idealism strives to remake the social order according to an ethical plan of justice or happiness. Only these enterprises attempt in modest ways what Plato did in a magisterial manner. But, whether in the grand manner of philosophy or the simpler mode of

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reasonable thinking, the Idealism of Plato reveals itself as a permanent possession and settled habit of the human mind.

When Idealism became a modern doctrine, it maintained the spirit but departed seriously from the letter of Platonism. What it kept was the mental interpretation of reality, which it overemphasized by putting mind upon a psychological basis. What it sought to reject was the universalism of Plato, especially at the place where Plato had made reals of his universals. Berkeley used psychology in place of Plato's logic and denied the validity of universal notions. Kant adhered to logic and the universals which it implies, but denied that these universals are realities. Then, both Berkeley and Kant, while differing widely between themselves, agreed upon a kind of polemical procedure by means of which they defied the reality of the external world and all those who stood in the position of its exponents. The grand spirit of Plato's Idealism was in Berkeley a Paradise Lost; in Kant it was regained in part only in the form of Objective Idealism.

Naïve Idealism

The Idealism of Berkeley is without a superior as an interesting and tantalizing doctrine. It took hold of the modern mind in the eighteenth century and immediately availed itself of

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what was then the new psychology, which it exploited to an extreme almost unthinkable. It was not until psychology had been more thoroughly digested that it became possible to provide a refutation of a system which placed the individual in a position where he might, if not must, say "The world is my idea." Even to this day, there are thinkers who take practically this position; indeed, if one sets out with Berkeley's fundamental principle, he can intrench himself in his own consciousness and insist, with the Symbolists, "The world does not exist for me!"

Such Subjective Idealism, which seems the very reverse of common sense, is really the most common philosophy of the average person, altho he does not base it upon any distinct principles of mind or carry it out to any theoretical extreme. Idealism is every child's philosophy, the sentiment of the person who has not carefully considered the claims of nature and society, the view of the sentimentalist, and a common tendency with all of us. So vivid are our own impressions and so personal our point of view that it is with difficulty that we emerge from subjectivism and emancipate the mind so that it is enabled to view the world with scientific breadth, the mind with psychological depth. Berkeley capitalized all this popular idealism, to which he gave the psycho-philosophical form of Locke's Empiricism. It may seem strange to link

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the Empiricism of Locke with the Idealism of Berkeley, for this would yield such an anomalous thing as "Empirical Idealism"; but such is the doctrine of Berkeley. It is the doctrine of Naïve Idealism.

The spiritual nature of Berkeley as a man and churchman made him receptive to Locke's theory that the mind, while it possesses no innate ideas, forms its own ideas from sensation and reflection and then comes to the realization that it knows nothing but ideas. Locke may not have wished to have this simple principle of Empiricism urged to a spiritualistic conclusion, since he was opposed to the notion of any spiritual substance. But he was just as much opposed, theoretically, to the idea of corporeal substance, and it was this anti-materialism which Berkeley took hold of and developed in the positive form of Subjective Idealism.

Those Primary and Secondary Qualities

With both Locke and Berkeley, the chief business of the mind was perception. Locke had applied the principle of perception in such a way as to make color and sound, as well as smell and taste, things that could exist—or effects that could be registered—only as there was a mind present for the seeing and hearing, smelling and tasting. But Locke saved the physical world by endowing it philosophically with the primary

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qualities of extension, bulk, form and motion. This was the famous, but none too fortunate, distinction between physically primary and psychologically secondary qualities. It had been made by Galileo, not for the purpose of building up an inner experience of secondary qualities, but with the aim of getting these personal things out of the way in order that the primary, spatial, objective qualities of things might be measured and science put upon a firm footing. Locke tolerated these primary qualities, altho they played no part in his system; but Berkeley was as determined to get rid of the primaries as Galileo had been to remove the secondaries. For Berkeley, all qualities of things are secondary ones; they exist in minds only and have no place in any supposed unperceived and unperceiving "matter."

While the average person lives in a little world something like that which Berkeley designed as his philosophical domain, the average person when called upon to explain the phenomenon of his own life readily assents to the idea of an external world in all its reality, wherein he enjoys the privacy of his own life. But Berkeley was satisfied to abide by pure subjectivity, with perceiver, perception, and the perceived order as the full reality. Descartes had insisted that the act of cogitation was sufficient to establish the existence of the ego, which could then deal with

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the world upon a purely physical basis; but Berkeley maintained that the cogitative act of perception was the basis for both the individual and his world. There is no color which is not a seen color, no sound not heard, or odor unsensed, or taste which is not registered by a perceiving subject. The primary, physical qualities which Locke has attempted to save from the devouring appetite of the individual perceiver are likewise absorbed by the tactual sensation for the ego whose world is his own. It exists by his act of perception, and hence to be is to be perceived.

When common sense sees how its self-centered philosophy begins to lead to such spiritualistic extremes, it protests that, after all, one does not eat and drink ideas, or clothe and house himself in them, but deals with realities. The practical mind, altho it is inclined to consider the world as only the sum of its sensations, objects to having the supposedly physical order—earth and sky, sea and mountain—reduced to a chimera or display upon the screen of the cinematograph. Such an idealized world would call upon him to change his language so that he would no longer speak of things, but of the mere ideas of them. But Berkeley found this unnecessary. He did not attempt to change the world as such, but only our interpretation of it, so that our conversation about it is as of old; for “we speak with

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the vulgar but think with the learned." And to a certain extent we still think with the vulgar, if we are idealists, since we accept the world just as it is or seems to be; only we as idealists refuse to credit the idea that there is a substratum of matter behind the spectacle of things. The same old world with a new, idealistic interpretation—such was Berkeley's philosophy.

The Same Old World

When, now, we consider the way in which science has thinned out matter until it consists of electrons and thus seems to be the stuff that light is made of, we can credit certain physical aspects of the Berkeleyan Idealism. We live in no substantial order, after all, and if it is not a world of percepts it is little better than a world of waves: hence the more plausible objections to Idealism are of a psychological rather than a physical nature. The trouble is with the subject of knowledge, not so much the object, since we shall always have that in one way or another. On the subjective side of the perceiver, who seems to be in a position at once omniscient and omnipotent, there is the extremely personal nature of the act whereby things are established in their idealistic rôle. Since the act of perception is personal, it will be difficult to account for the idealized world of things seen and heard when the personal perceiver is absent in place

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and time; for one cannot be everywhere at all times. Fortunately, there are other perceiving spirits who, as it were, can watch the world for us when we cannot be there, altho it may be difficult for us to understand how we can believe in the existence of other minds, since they are not the subject-matter of our perception.

But above all, there is the Supreme Mind of the All Perceiver whose perception of the world is creative and complete, for like the keeper of Israel He neither slumbers nor sleeps. In His divine vision are all things established as they are also upheld, not by might or power but by His Spirit. Indeed, the grand reason for believing in the existence of God is found in the idea that the existence of the world requires this All Perceiver. His is the original and creative act of perception. Our petty human perceptions are only fragmentary copies of the omniscient act. Or, as Father Malebranche had said ten years before Berkeley's birth, "We see all things in God"; or as the Psalmist had expressed it before there was any philosophy at all, "In thy light, O Lord, shall we see the light." Now, this transposes Berkeley's system into a Theistic Idealism, but the source of it is still open to investigation if not question.

Philosophy can hardly question the right of a thinker to make the world over into a system of Ideas, as Plato did in his day, or to place at the

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center of it an Absolute Mind as the world ground. That sort of philosophical procedure must be judged by the assumptions made and methods employed. Plato and Aristotle, Spinoza and Kant are in formidable positions whence they are not easily dislodged. The same, however, cannot be said of Locke and Berkeley, who lack secure starting-points and sound methods. Both of them start with man's immediate consciousness, whence they proceed, especially in the case of Berkeley, by means of purely psychological means to metaphysical conclusions. It is difficult to psychologize man; that is, to give an adequate account of his nature upon the simple basis of consciousness. It is so difficult to psychologize the world that the task might be called impossible. When we avail ourselves of our logic, we may be in a position to grasp the nature of things, which seem to exist and operate by means of something logical. But when we have at our disposal only the sensations and perceptions of the mind in its superficially psychological aspect we cannot land the world any better than we can draw out the Leviathan with a hook.

The Cure for Idealism

Schopenhauer said of such Idealism, which had itself infected him, "It stands in need, not of a refutation, but of a cure." It is far from pleas-

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ant to think of Idealism as infection, but, as has been observed, it works in both a psychological and pathological way in the average person, who is self-centered, self-indulgent and narrow. It appears more malignantly in the confirmed drunkard and drug-addict. It shows itself esthetically in the schools of Romanticism, Decadence and Symbolism. It is a state of mind which each one of us indulges at times, or which each preserves as the essence of his private life. When the philosophical meaning of this attitude is summed up, it amounts to the idea that the ego alone exists and that the world is only its idea.

The "cure" to which Schopenhauer referred was one which he himself did not prescribe. What he did was to render the individual an illusion, as tho he would get rid of egoism by getting rid of the ego and thus throw out the child with the bath. What Idealism needs is to be saved from itself. It may be cleansed of its egoism and then use the ego for some better purpose. The method of cleansing consists, as it were, of a sort of psychotherapy or even psychoanalysis, in that the idealizing ego is shown wherein its error lies. This is diagnosed at once as "Solipsism," or the idea that the self is the sole existent in the world. There are those who proceed under some such bland assumption, others who through stimulants and narcotics get

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themselves into such a state of mind, and disordered minds who fall victims of ego-mania.

In the case of Berkeley's Idealism, however, this psychological conclusion was one which was forced upon him by the exigencies of his doctrine. For when we say, "To be is to be perceived," the act of perceiving, in distinction from the act of thinking generally, takes its stand within the ego, whence it cannot be dislodged. The result of the whole philosophical procedure is not to establish the world; if it succeeds in establishing the ego, when it seems as tho it did no more than account for a percept for the time being, it makes it only a ruler over a petty principality. Then it may boast, "My mind to me a kingdom is," or lament like "Columbus without America."

Solipsism

The Solipsism to which Berkeley's Idealism leads is assumed nowadays to be a complete refutation of his system; the ego is given enough psychological rope and then hangs itself. But, in Berkeley's day, when neither natural nor social thought had much authority, such Solipsism was not looked upon with disapproval. Descartes had sought so strenuously to establish the self that the century following his death seemed to feel it had a right to exalt the ego above the world, until its position was not only

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supreme but solitary. It was not until the middle of the eighteenth century that the term "Solipsism" was defined in an unfavorable manner or regarded as a principle fatal to philosophy. Now it is fully appreciated that a system of thought which is based upon personal perception is unable to grasp the world. The more evident it seems psychologically, the less evident is it logically. It presents a solipsistic picture of a person in a brightly lighted room whose very brightness prevents his seeing the world outside. The essential qualities of things, the primary qualities, can never be as bright as the immediate states of mind, but they exist and can be made the subject-matter of knowledge if the knower will use something more fundamental than his process of private perception.

The inability of Naïve Idealism to grasp reality by obtaining knowledge of it appears, on the other hand, its lack of an active process. For the world which confronts the mind and challenges its philosophy is a scene of change and movement, while the mind which attempts to lay hold of active nature is itself dynamic in the power of its will. Why should philosophy listen to Naïve Idealism, which makes the world a house of cards whose bright surfaces can be contemplated, but whose fragile structure can endure no movement, when the actual world is a tremendous mechanism which both engages the

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intellect and challenges the will? The world which philosophy will come to look upon as a real order is one which can endure action on the part of man, just as it is one which provides for the mind reactions more adequate than those included under the head of perception. It is as much an obstacle to man's will as it is an object of his intellect. Now, this activity in nature and man was something which Naïve Idealism failed to take into account.

The importance of the will as an organ of knowledge becomes especially important in a system like that of Idealism, since Idealism tends to create the impression that the world is an illusion. As soon as one has said, "The world is my idea," he is bound to inquire whether his idea of the world is a real one and not a fiction. At such a juncture, he is most likely to resort to action as a test. Can he rely upon his world of ideas? Will his house of cards endure movement? Can he lay hold of the world or must he be content merely to brush it with his perceptions? The situation in Idealism is akin to that depicted by Calderon in *Life a Dream*, wherein the hero, in serious doubt about the reality of the world which he experiences, is advised to test it by action; or as Calderon expresses it, "If life is a dream, we should live well within the dream." This is the moral lesson which the skeptical drama seeks to impart. The

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metaphysical conception is that the world cannot be accepted as real unless it has the power to sustain action on the part of the will. In the instance of Naïve Idealism, the kind of world which is presented to us for belief is one which, while it may assume the form of a spectacle in the mind of the individual, is unable to endure action on his part. At the slightest move, this world collapses like the house of cards.

Critical Idealism

The term, "Critical Idealism," is used to indicate the fact that philosophy, in its endeavor to establish the mental character of reality, goes deeper into both the subject and object of knowledge. This was the work of Immanuel Kant in his *Critique of Pure Reason*. It is the amateurish opinion that this book was written, as it were, in hieroglyphic style, whence the comprehension of it is practically impossible except by the very elect, who themselves grasp it in part only. The *Critique*, which consists of nearly a quarter of a million words, was written, or put together, in the space of only five months by a thinker whose logic was so intensive in his own mind that he failed to render expressive the language which he employed. The perusal of this work is made difficult because of the sentence-structure rather than on account of the terminology. Nevertheless, the *Critique* is no sealed

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book, but only a profound work on the fundamentals of philosophy. Hence it is wiser to look upon Kant's *magnum opus* as the great modern contribution to philosophy, not as the cryptic work of an eccentric German professor.

What Can a Man Know?

Kant is perfectly plain in both what he plans to do and what he achieves. He expresses his purpose in the form of the great critical question, "What can I know?" Is not this the usual question with a philosopher? Having projected his original query, Kant proceeds to inquire, "How is mathematics possible as science?" "How is physics possible as science?" "Is metaphysics possible as science; and if so, how?" The answers to these direct questions are just as frank: Mathematics is possible because the mind is in possession of the intuitive forms of space and time wherein geometry and arithmetic are found. Physics is possible because the same mind is in possession of the fundamental principles, or categories, like those of quantity and causality, which lie at the basis of mechanics. Metaphysics is not possible as a science, since it presents no field or subject-matter on which the mind can work or to which it can apply its forms. It becomes possible, however, in an ethical way, as the science of what ought to be instead of the science of that which is. If Kant

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had stated his philosophy with such amiable simplicity, however, it would not have furnished such a comprehensive analysis of human understanding, nor would it have made his case so convincing. No, nor would it have brought out the paradoxes for which the Critical Philosophy is famous.

Kant's Critical Idealism can be located quite distinctly when it is surveyed from the standpoints of Berkeley and Plato. Like Berkeley, with whom he would not have his Idealism confused, Kant starts out with a psychological conception which yields him two fundamental "Intuitions"—Space and Time. The intuition in question is a "blind but indispensable function of the soul," which works beneath the surface of thought to prepare the raw material of mind for the more analytical understanding. As soon as Kant takes that stand, he places his thought out of range of everything in Berkeley's Naïve Idealism. When Kant is contrasted with Plato, whom he felt free to criticize and caricature, it will be seen that he makes use of a Platonistic framework of knowledge; unlike Plato, however, he does not apply this to reality, but to appearance only; not to noumena but to phenomena. In this manner, Kant establishes an absolutistic system of knowledge upon a relativistic basis, but this is exactly what physical science does in a more concrete and practical

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way. What Kant does amounts thus to giving a critique of science, or to placing science on a direct and self-conscious basis. There was no doubt in Kant's mind that knowledge was carrying on in a true way; his only question was, "How does knowledge operate, and how far can it go?"

Critical Idealism, as presented by Kant, spreads both Rationalism and Empiricism out over the framework of logic, with the result of discovering that the two together cover the field of physical knowledge, but no more. It succeeds in making the assurance of science doubly sure by means of philosophy. It would like to continue the knowing process out into the remote realm of the metaphysical, but discovers to its dismay that the attempt to extend knowledge beyond its scientifically proper domain leads, not merely to no path, but to a confusion of pathways which are beset with contradictions, or "antinomies." Philosophy is taught thereby to remain within its proper field, which is that of experience or possible experience, and not seek a place in the metaphysical sun. In that realm, which is too bright for the eyes of understanding, are the ideas of God, the soul, and the world as a complete whole. The human understanding may think these entities but cannot know them. The moral will, or Categorical Imperative, can break the circle which the under-

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standing has to draw around itself, but this act will yield belief rather than knowledge.

The way in which Critical Idealism outlines and analyzes the proper field of knowledge involves the whole science of logic treated in a manner so theoretical and technical that Kant felt constrained to call it "Transcendental Logic." Insight into this extraordinary procedure may be had and enjoyed by observing how Kant treats his "Intuitions" and "Categories," which are fundamental forms of sense and understanding respectively. The intuitions are those of space and time. The categories are twelve in number, but, without carrying this duo-decimal system along in toto, one can gain sufficient insight into it by using the categories of Quantity and Causality, by means of which science measures and explains. In dealing with factors which make science possible, Critical Idealism begins and ends by insisting that they are mental. It is not that psychology reveals them as things within the mind, but that logic demands their presence there in order that knowledge may have universal validity, or be true. Now, this act of internalizing everything is the essence of Critical Idealism.

Is Space in Us?

The first step which Idealism takes in rendering the whole world mental is in the direction

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of Space, the form in which our experience of the world is given us. Modern science began by showing us that we must revise our common perception of the spatial order when it substituted a round world for what seemed to be a flat one, a rotating earth in place of a stationary one. The old view still obtains with our eyes, but we have learned to set it aside as one of our permanent illusions. The more advanced physics of the present tends to lure us farther from common-sense perception of the spatial world by regarding time as a fourth dimension. These ordinary and extraordinary revisions incident upon modern science tend to make the idealistic treatment of space appear less extravagant than they seemed when Kant announced that what appeared to be a great objective fact was really a subjective method of representing the world.

When Kant changed the status of space from an outer to an inner one, he felt that he was carrying on what he called a "Copernican revolution." It is true that, like the modern astronomer, this modern Idealist was instituting a great change in our way of regarding the world; but the Kantian revolution was the Copernican one reversed. Copernicus changed his point of view from earth to sun, or from a near-by object to a remote one; Kant effected his change by shifting his view from matter to mind, or from a remote object to an intimate one. Once he had

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rendered space objective, the way was prepared for an idealistic view of the world. The world did not become his idea in the sense of Subjective Idealism, but it was made over in terms of the elaborate mechanism of the human understanding, of which all nature henceforth was to be modeled.

When we begin to think about space, whose nature seems so obvious and objective, we awaken to the realization that its very simplicity involves a subtlety of which action is not aware. Space lacks force and offers no resistance to our efforts, and yet it manages to preserve the boundaries of objects and keep them at their distance. It acts like both the weakest and strongest of things. It seems to coincide with matter, and yet, unlike matter, it does not break up in a variety of things, but maintains its unique character no matter what is done to or thought about it. When we attempt a rationalistic treatment of it and try to deduce it from something higher in the logical scale, like "extension," or when we attempt the deduction of particular objects from it, like man from mortal, we are balked, are unable to make even a beginning. There is nothing like space which is superior to it; there is nothing in universal space which is not found in some particular portion of it. The geometer who is proving a proposition is unlike the logician who is drawing a conclusion, for the geom-

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eter always feels his way along the stages of his demonstration by a process of intuition whereby he can represent his reasoning in a perceptible way.

If, now, we turn from deduction to induction, we realize that this empirical way of proceeding may be all right for a botanist but not for the geometer. In geometry, we do not collect kinds of spaces and then classify them, for a triangle is fundamentally different from a three-leaf clover. What we might hope to find by generalization after assembling all sorts of spaces is found immediately in the portion of space with which we are dealing, as tho it were a tempest in a teacup. After one significant look at the world, the geometer is in a position to reason indefinitely about space, his subject-matter. This could never be the case with an allied phenomenon like color, which lacks the universality of space, requires definite experience with different colors, and cannot be worked over into a possible geometry, or "chromometry."

The indifference toward both rational deduction and empirical induction appealed to Kant, altho his method of rendering space subjective was somewhat different; it was more psychological. When we try to think of space as something in us and not outside in the world, we encounter two difficulties. First, when we go over our mental outfit of sensations, ideas and

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the like, we do not so easily identify space as an immediate datum of consciousness. Secondly, when we look at space itself, it has a distinctly objective form. How can Idealism hope to carry out its great revolution? Kant answers this impromptu question by suggesting that a deeper view of consciousness reveals both the mentality of space and the spatiality of mind. On the other hand, if we persist in looking upon space as objective, we shall become perplexed about the question of its size, whether it is finite or infinite; so perplexed as to find ourselves landed in everlasting contradiction, or antinomy. Hence we must conclude that space is subjective and cannot be objective.

According to Idealism, space is in us more than we are in it. When we cast about within ourselves after the manner of a loose, popular psychology, we do not come upon it the way we encounter a sensation like color. But when our psychology becomes tight and philosophical, we seize it as with hooks of steel. Then we see, as Kant points out, that we must have spatiality as a necessary preliminary before we can perceive particular objects in space. It is antecedent to every perception of space. Then, after every object has been removed or thought of as eliminated, we still have space as necessary residuum. As spatiality was present before every object, so it abides after the departure of the object. Then

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we begin to see that space, instead of constituting a container for the things of the world, forms as it were the very walls of the mind. We do not find space in the world, but we spatialize it. Or, as Bergson has expressed it, "The more consciousness is intellectualized, the more is matter spatialized."

The Size of Space

In the particular case of Kant, we may not be able to determine what motives led him to spatialize the world; but we may assume that, first of all, he despaired of dealing with space as long as he thought of it in an objective way after the manner of common sense. Space must be at least non-objective. When Kant was led to render space subjective, he must have had in mind the way in which the mind, when dealing with space geometrically, ever proceeds with both logical certainty and the ability to put its propositions in a perceptible form, as in the diagrams of geometry. Such reasoning was at once certain and perceptible. It made geometry a perfect science with its foundations in the mind itself. In order to accept such an extraordinary view as that of Idealism, we must realize that space is needed by mind more than by matter. When we assume a dynamic view of matter—as modern science has always done more or less thoroughly, however much it may have spoken

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of matter as "that which occupies space"—we come to realize that spatiality is far from being a physical attribute of things. Matter with its inherent energy and indifference to structure can get along without space. But mind, which at first seems so foreign to space, has a method of procedure which is always analogous to spatializing, as appears directly in the commanding science of geometry. In all our reasonings, however abstract, we aim at graphic representation and thus find space the readiest and most complete way of adjusting thought to thought. Kant made geometrical space a part of mind; Bergson makes mind entirely spatial; we may rest assured that the spatial is closely akin to mind, more so by far than to matter.

When Idealism attempts to make assurance doubly sure by showing that space cannot be objective, its results are not so satisfactory to the philosophical mind. In opposing the objective view, it proceeds, as did Kant, by reasoning according to the "size" of space rather than upon the basis of space's own nature. The question of size has to do with the finitude or infinitude of spatiality. According to Kant, the mind is placed in a fatal dilemma. If the mind makes space a finite thing, it will be too small; if it makes it something infinite, it will be too large; hence the mind is inclined to cut the Gordian knot and make of space no thing at all. In thus reasoning,

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Idealism makes use of the logical dilemma without fully inquiring whether such logical routine is adapted to such extraordinary horns as the finite and infinite. If one cares to reason that an organism must be either a vegetable or an animal, or that matter must be organic or inorganic, one can feel secure in his thought, since he is able to draw a complete circle of knowledge about the concepts, organism and matter. But when it is a case of pure quantity and the juncture is between the finite and infinite, the usual mode of procedure does not seem as simple or secure. It may be possible to think of the universe as both "finite" and "infinite" at the same time; or to think of its finitude in ways which shall not disappoint the mind's desire for the infinite and absolute.

The Boundary of Being

Kant in particular seemed to feel that, when we are dealing with actual existence, as in the case of space, we must think of it as in some sense bounded, since we cannot consider reality as something which drifts off into everlasting nothingness. We ourselves feel that way when we think of matter as limited and of space as unlimited. But, according to Relativity, we may have, as it were, both the finite and infinite together when we think of the universe as finite but still as having nothing outside it as its

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boundary, in which secondary sense it is infinite. If such a notion as that of an infinite finitude, or an unbounded but self-limited universe, be acceptable, we may dissent with and depart from Kant's particular notion that space cannot be objective because it is non-measurable. We can and must think of space as relative to something else instead of being an entity in its own right, and if we are to have a science of geometry along with a geometrical view of all reasoning, we need spatiality as a form of mentality.

Once Idealism has subdued the exterior world by idealizing space, it is in a position to rationalize all reality. In the case of Kant, the act of making the world mental was carried on by means of logic, "Transcendental Logic," as he called it. In a certain sense, the whole problem of philosophy as knowledge narrows down to a choice between a subjective or an objective point of view. Knowledge itself, in the form of common sense or in the more exalted sense of science, goes on, draws conclusions and produces results, so that the *de facto* rule of reason cannot be questioned. But how is this relationship between the subject and the object, the knower and the known, to be explained? Either the objective order places its stamp upon the inner one, or the subjective realm sets its seal upon the outer world. If things are dominant, thoughts can only receive impressions from them or make

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copies of them. This will produce a Realism with suggestions of Materialism. If thoughts are in the ascendancy, the things of the world will assume the flexible form of phenomena and be made or shaped by the thinking mind. This will result in Idealism with suggestions of Phenomenalism. The Idealism of Kant, which had found it possible to make space or the general form of the outer world something mental, did not hesitate to render the whole order of nature a mental product.

If we question by what right the mind is made master of reality, the answer forthcoming immediately is—knowledge. When mind is regarded psychologically as a field of sensations, it is hardly possible to do this, since mind in the ordinary sense of that which is related to the body through the brain is obviously a product of nature. But when mind takes on the superior meaning of logical thought to reveal universal and necessary ideas, the source and sanction of thought cannot be found in anything but the mind itself. In the mind of Kant, that which the exterior order of nature lacks, among other principles, is the idea of connection. The skepticism of Hume had disjoined the natural order when it removed from knowledge the idea of causality, or necessary connection. Now, that which the Idealism of Kant attempts to do is to put that principle of causality back into the

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world, or to provide for the lack of it in nature. Indeed, if it were not for the power of the mind to supply causality, there would be no nature at all!

Reason Rules the World

The transcendental act by means of which Kant as Idealist contributes causality to nature, or imposes its causal rule upon it, is performed by that boldest and most difficult part of the *Critique of Pure Reason* known as the "Transcendental Deduction of the Categories." It is one of the various "impossibilities" of this terrific volume of philosophical literature, yet we need not wholly despair of it. The transcendental act begins by laying hold of the fundamental concepts of the human understanding, which are found in the judgments of logic just as surely as arithmetical products are found in the multiplication table. These are the judgments of Quantity, Quality, Relation and Modality. They amount to quantity on a large or small scale, as also to the ideas of causality and substance. Kant's idea is that nature herself neither counts nor connects, so that the understanding must supply the mathematical calculation and causal connection. This is done by the faculty of judgment, whereby we apply attributes to things and relate the particular to the general, as when we say "iron is heavy," or

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‘the horse is an animal.’ In addition to these rather trivial judgments, we form connections of a causal character, when we say that motion is the cause of heat. Now, to know is to judge, to judge is to connect, and to connect in the form of universal and necessary principles is to relate all these judgments to a unified or centralized act of mind in the form of an “I think,” which is the hub whence radiate the spokes of true knowledge. This so exalts the understanding that it assumes the position, altho it does not enjoy the range, of omniscience.

Kant expresses this with no lack of confidence when he asserts that “the understanding is the lawgiver of nature.” He was aware that his transcendental dictum might seem extraordinary, but having let the mind absorb space and further having directed the categories of the understanding to impose the very conditions of experience, there was nothing to do but let the mind exercise its regency over things. Where could the idea of Quantity come from if not from the calculating understanding? How could nature rejoice in causal connection if the mind did not supply this in the form of sufficient reason? Nature may supply the stuff of knowledge, but the form must come from the mind itself. In so reasoning, an Idealist like Kant seems to have been inspired by the imperialism of his Frederick the Great; aye, he emulates the example

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of Louis XIV when Louis identified the State with himself and said, *L'état, c'est moi*.

But there were limits to the transcendentalism of Kant, which he imposed upon his own thought. The regency which the understanding exercises in such a way as to suggest omniscience and omnipotence was confined to the world of appearance, and had nothing to do or even say about the real world of things-in-themselves. The understanding might be absolute, but its knowledge was relative; or the greater the knower, the less the known. Now, while this may seem like an anticlimax to a transcendental system of Idealism, it is about what we have experienced with our modern science, which has proceeded with the assurance of certainty in supplying us with an incredible amount of knowledge, but which is unable to tell us anything about God and soul and is more or less agnostic as to matter and motion. Idealism extricates itself from this difficulty by appealing to reason in its ethical form, or by supplying the demand for what-is by offering an equal amount of what-ought-to-be, which amounts to giving us ideals for ideas. The net gain for the practical mind is a certain confidence in human reason, or a belief in the human ego as knower of the world. We gather from all idealistic procedure that we have a right to believe in reason.

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in man, in ourselves, but our gain is on the side of the knower rather than the known.

What Is the Basis of Being?

The philosophical questions which are precipitated by Idealism, especially in its Kantian form, have to do with the grounds of truth as something distinct from its criteria. These questions may be expressed in the form of several philosophical propositions, each of which in its own way attempts to afford the basis of truth. We may say that truths are true because they exist in a material world, which is the belief of materialism. The objection to this physical explanation of truth is that the world of material objects is no place for truths, since it is a world of space and time, whose objects are imperfect and fluctuating. If the geometer depended upon the physical world for knowledge of a triangle, he could never prove the various propositions about triangles which have their place in his perfect science. The material order can corroborate truths which are obtained from and demonstrated by reason; it cannot produce or prove these.

The idealistic answer to the question, "What is the foundation of truth?" is offered in the spirit of psychology to the effect that truths are true because the mind thinks them. Such was the implication of Kant's Idealism when he asserted

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that the understanding was the lawgiver of nature. At this point, much depends upon how the term "understanding" is defined. If we take it to mean the human understanding, we are confronted by the difficulty that there was a time when human beings did not exist, and we can hardly imagine that the truths of mathematics and logic, which were discovered by man, could wait for his appearance on earth; for the truths in question seem to have about them a certain timelessness. If, as seemed to be the case with Kant, we refer to understanding in a formal manner as tho it were possessed and exercised by a kind of ideal man, or superman, we are solving our problem in a purely theoretical or symbolic way. The psychological method of founding truth seems as impossible as the physical one.

Absolutism

In its desire to preserve mind as the home of truths, Idealism resorts to the idea of an Absolute Mind as that which thinks the fundamental truths or possesses them as its very nature. Truths are true because the Absolute thinks them. If it be said that we have no reason for believing in an Absolute mind, it will be replied that the demands of truth are such that we have to set up, or postulate, such a mind in order to explain truth. But this would result in a vi-

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clous circle, since the idea of truth would depend upon the Absolute and the Absolute upon the idea of truth, altho the Idealist might reply by saying that it is by truth that we know the Absolute while it is by virtue of the Absolute that truth exists. The method cited in this third instance is that of Theism.

A fourth possibility appears in a less definite but perhaps just as defensible form when it is claimed that truths are true, not because they exist in matter or mind, but because they *subsist*, or obtain, in a realm of true relations. This vague realm can be identified further as the World of Being, in distinction from the existing world of matter, which comes to be known by an existent mind. It is an order of being which was disclosed by Plato and is well known to the mathematician and metaphysical thinker. In this World of Being, truths do not issue from matter nor are they produced by mind; they simply obtain as the very foundation of true knowledge and real existence. This true world is very different from the heterogeneous order of existence in which we find ourselves, and in which we become acquainted with a multitude of facts apparently independent. But science tends ever to reduce the heterogeneous to the homogeneous, quality to quantity, and different phenomena like mass and motion, heat and light, gravitation and electricity, to a simplified, uni-

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fied field of knowledge, which might be accepted as a promise of the intelligible world of being.

Of the four attempts to find the basis of truth, only the second pair seem capable of sustaining persistent reflection on our part. We may feel for a time that truth reposes in matter, whence we take it to make it our own; but the ideas of universality and necessity are such as to demand something more fundamental than materiality can supply. Again, we may be impressed with the idea that mind, which discovers truth, is the basis of the true; but when mind is taken in its human sense, its origin in time, if nothing else, counts fatally against its being the foundation of that which it discovers. Hence, if we are disposed to follow speculation to the extreme, we are placed where we must choose between apparently rival propositions to the effect that truths are true because the Absolute thinks them, or they are true because they obtain, subsist, or have being in a Platonistic sense. The choice is that of an Absolutism here or a Realism there. It amounts to an interpretation or application of Platonism, or whether we shall have our Platonism in the personal form of an Absolute Thinker or in an impersonal way as Thought in itself.

In order to place this fundamental discussion in fuller, clearer light, it will be expedient first to consider the general claims of modern Real-

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ism and then to discuss the absolutistic and realistic claims to define truth.

REALISM

The term, "Realism," does not convey its meaning as readily as the words "real" and "reality" might suggest. It is used to indicate the philosophical belief that the things of the world are just as they are presented in immediate perception, in which case we should have a sort of Naïve Naturalism. Or it may stand for a kind of scholastic Realism, wherein universal ideas are taken to be realities, or where, in a more modern way, the laws of nature are things. But the way in which the term "Realism" is used in contemporary philosophy is not so difficult to grasp, even when we have to be content with a negative form of definition. Realism means anti-Idealism, for it is chiefly a philosophical polemic aimed at the traditional notion that to be is to be perceived or to be thought. If Realism had understood its mission, it would have paid less attention to pure theory of knowledge, with its problem of subject and object, and have devoted itself more fully to an analysis of existence as this is given in the forms of physics and psychology. That would have yielded a Realism more worthy of the name. But the Realist seems to have felt that he must rid philosophy

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of its idealistic interpretation before the realistic analysis could be carried on profitably.

The Revolt of Realism

In its attack upon Idealism, Realism has made the attempt to drive the mind out of the strategic position in which it was placed by both Rationalist and Empiricist. On the rationalistic side, Descartes and Kant made the "I Think" the first and final factor in all speculation; among the Empiricists, Locke and Berkeley were as insistent upon a sort of "I Perceive" as the fulcrum for the speculative lever. These views seemed to be well intrenched, inasmuch as, in the last analysis, all that one can think or say about truth or reality is that which he finds in his own personal mind. This psychological phenomenon revealed by introspection is something which Realism would discount as far as possible by minimizing its importance or setting it aside as illusion. The realistic point of view has been made more plausible by Behaviorism, which reduces sensation and, indeed, consciousness to negligible proportions; it has been aided by Sociology, which keeps before us the group-mind rather than the punctual impressions of the isolated individual. Under such naturalistic and sociological auspices, it is difficult for the Idealist to keep on talking about the subject and its object, for the pattern which science gives us is

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that of many minds touching nature at various points.

In this conflict between Realism and Idealism, or Naturalism and Spiritualism, it is a question whether Idealism, for its part, has understood its mission either. It has reposed complacently in a sort of academic "I Think" without realizing that it is now like a monarch who may still wear his crown but has lost his kingdom. The subjective criterion of truth and reality may still hold in a way, but it is only after the manner of what the Realist calls "the egocentric predicament." Now, the psychological fact that, in the last analysis, all knowledge about the world results in what the individual mind may think about it is more of a "predicament" than a principle, and if the one-time subject of knowledge is to exert a sway at all comparable to that of the law-giving understanding in the Transcendental Philosophy of Kant, it must present as candidate for the office or pretender to the throne a subject of knowledge worthy of the name. Otherwise, the "I Think" is no more than an interloper in the scheme of things generally.

Are the Mighty Fallen?

What did Idealism do when it exalted the thinking subject to its supreme position and made the things of the world imitate it until they themselves seemed mental? It did not put forth

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much effort, for it failed to realize that, in the face of nature, vast, complicated and brutal, it is necessary for the inner life of man to assert itself with vigor and by all the means at its disposal—speculative and spiritual, moral and religious. As a matter of fact, these are the ways in which, by means of culture, the inner life of man has been built up. It has a rich and varied content, authentic in form and powerful in intention; but much of this has been lost on the Idealist, who has been content to affirm only the most academic phase of mind, thought, perception and the like. The Idealist has availed himself of the psychological process of cognition, which he has attempted to make the model for both the subject and the object, as he calls them, or of man and nature. It is this kind of idealism which is being driven out by realistic criticism, but there is still an implicit Idealism which may perhaps be developed after the realistic cleansing has done its work.

In a more definite way, it may be said that what Idealism did in establishing itself as the most commanding form of philosophy consisted in exalting and emphasizing consciousness in one or another form. At first, it was consciousness in the substantial form of mind, or that which thinks. Then it thinned out in what Kant called "the synthetic unity of apperception," which afforded knowledge of the object but shed no

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light inward upon its own nature, for it was like the eye which sees its object but not itself. Now it has become little more than an "awareness," whose very existence is denied by the psychology of Behaviorism, and whose evidence is made merely circumstantial by Realism. If the mind cannot establish itself by means of its sensations in particular and by consciousness in general, how can it hope to be the foundation of the world? Thus, one might say to the Idealist what the prophet said to Israel, "If thou hast run with the footmen and they have wearied thee, how canst thou contend with horses?"

The idealistic endeavor, which Realism is now seeking to neutralize, consisted in making the mind independent of the outer world, as Descartes did with thought and Locke with sensation, and then making the outer world dependent upon mind. This was done generally by the perpetual assertion of consciousness as the first and last thing about all knowledge of things. It was done more definitely by insisting upon the secondary qualities—the subjective ones, like color and tone. Some Idealists have admitted the existence of the primary qualities of things, like mass, motion and the like, just as some Realists have credited the existence of the secondary qualities. But Idealists par excellence have usually insisted upon the finality and supremacy of the secondary and psycho-

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logical qualities of things, while Realists of the first order have been as dogmatic in their assertion of finality and supremacy of the primary, physical qualities.

The Essence of Consciousness

The present situation in psychology and philosophy is such that the defender of idealistic faith must abandon the idea of making consciousness the essence of the world and try to show that it is essential to man. Does consciousness exist? Are there such things as sensations? These are the questions which are more pertinent than the old-fashioned ones which had to do with the relation of consciousness to the world. Now, the strong point, as well as the weak one, in the idealistic argument is that the existence of consciousness has to be proved by itself. When we consider such phenomena as color and tone, must we assume that the nature of the visible and audible is wholly accounted for by the physical presence of that which shines and rings? Or may we venture to believe that a part of the transaction takes place in us, who seem to see and hear? The old Idealism asserted that sensation was wholly psychological; the new Realism is just as insistent in saying that sensation is wholly physical. Thus has arisen a struggle for existence on the part of consciousness.

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In reviewing the present situation in philosophy, it seems that we can do no less than assume the presence of an "awareness" on our part when we are confronted by objects which stimulate our sense organs. After nature has equipped us with an elaborate sensory system, it would be a disappointment to learn that we could not participate in such physical phenomena as fall within the range of our senses. We may admit that consciousness cannot create the red color at one end of the rainbow and the blue one at the other, but it can be aware of these colors and the difference between them. Let physics and physiology give their explanation of these color-phenomena in terms of light and the retina, but we must still insist that we are aware of something which has a quality of its own. We verily know that there is a difference between being aware of objects and not being aware of them, just as we distinguish between being awake and asleep. And such differences and distinctions are made on the assumption that there is such a factor as consciousness. In our cynical moments we are prone to assume that most people go through life in a mechanistic way in response to external stimuli, just as we are often forced to admit that we ourselves are as susceptible to the externalities of experience, which seem to make consciousness no more than a sort of luxury on the part of privi-

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leged persons like seers and artists. But there is still an undeniable nucleus of sensitivity.

The sensitivity of the mind to both itself and its object has been used by the Idealist to build up, in a most impromptu fashion, a "consciousness" which Realism has been able to attack with such success as to cause retreat if not defeat. Idealism has set up as the subject of knowledge a man of straw. This has consisted of purely psychological material which afforded the self a poor content. It has consisted of crude consciousness, raw sensation, illusions, hallucinations, errors and the like. By appealing to these as the mind's private possessions, Idealism has hoped to establish an independent and characteristic subject of knowledge able to sway the whole world. It has availed itself of the psychological fact that, after all is said and done, there remains only the subjective fact that this or that individual perceives this object or thinks this idea. But that in itself is of slight importance; when that subjective fact is made the basis of a philosophical system, it leads to the Sophistry which makes the individual man the measure of all things. And philosophy was not placed upon a firm foundation until, as in the case of Socrates, this Sophistry was overcome.

When the Idealist makes the appeal to consciousness, as he has done ever since Descartes made his supposed discovery of the self, he is

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under the illusion that self-consciousness can be found at the end of a short journey and achieved after a minimum of effort. He should have learned from Hume that the self is far removed from the usual stream of consciousness, from Kant that it is most difficult to assert its existence. It is quite possible that the subject of knowledge, or self, can be found, but that can come about only after an effort far different from the introspective act whereby Idealism has sought to establish the self. Idealism has availed itself of little more than subjective impressionism; it has made awareness the end instead of the beginning of a mental act, and has not realized that the consciousness of selfhood comes into being only after effort. The kind of consciousness which Idealism has had to offer is such as to be seriously threatened by behavioristic psychology and realistic philosophy.

The Man of Straw

The particular appeal which Idealism has made shows itself, first of all, in sensation. It was on sensation as a purely subjective product that psychology was developed from Locke to James over a period of two centuries, as it was upon sensation that Idealism thrived from Berkeley to the idealists of the twentieth century. In dealing with this psychological phenomenon, Idealism has been like the camel which was

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allowed to put its cold nose into the Arab's tent but kept on until it was in possession of the entire shelter. For, Idealism began by appropriating simple sensation as something subjective, as was the case with Locke, and ended by taking possession of the whole objective order, after the manner of Berkeley and his long line of followers. It may be possible for mind in some form to exert its sway over the whole world and establish an idealistic order there, but this majestic act is not to be performed psychologically by insisting upon the subjectivity of colors and sounds. For, as far as genuine Idealism is concerned, these may belong to either the subjective or the objective order. If it could be proved that color and sound were subjective, the result, as far as sensations are concerned, would be to make idealists of all forms of consciousness, that of the beast as well as that of man. Now, it is human rather than animal Idealism that philosophy is expected to prove.

In the case of color and tone, which is a typical example of sensational Idealism, our knowledge of psychology and physics is now such that we can discuss the question of these sensations without pondering long over the problem whether the object has the color or whether this is something in the mind. For we know that color is something shared by both the psychological and physical. When the color stands in relation

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to the eye, it is the color-quality of psychology; when it is considered in relation to the sun, it is a matter of wave-lengths. If we went on to view it in still other less obvious relations, it would amount to observing the effect of light upon the skin as also upon plants. Naturally, we are interested in light from the standpoint of illumination and coloring, but that is no reason why we should try to build up an idealistic philosophy upon the basis of the one, or retinal, effect which light happens to have. Hence we can no longer repeat the axiom of Idealism that color is nothing apart from the person seeing it. The function of vision is extremely convenient, and the phenomenon of color unusually interesting, but these experiences of ours, brought about so naturally by our contact with the world of things, are not fruitful sources of a theory to the effect that reality is mental.

Idealism fares little better, if not worse, when it sets up its man of straw in the field of perception, especially when the perceptual process, instead of presenting the real object, is so misled subjectively as to create an illusion. The value of illusion for Idealism is wholly negative, since no sensible Idealist would dream of establishing a knowing subject, or self, on the basis of a mind which rejoices in its own, but false, ideas. But what Idealism is after, in its tentative insistence upon the illusion, is independence of the

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physical world. Hence if, in the case of illusion, it can be shown that here is a product for which mind and not matter is responsible, it is argued that to this extent the mind is independent. The situation which encloses it is purely psychological, so that if one is desirous of liberating the mind from its usual bondage to matter, one would better urge the psychology of illusion as argument for the mentality of things generally. When the mental state is one of hallucination, and there is not a misconstrued but a manufactured object present in the mind, the degree of subjectivity is heightened, but only as that of significance is lowered. One may get further into his mind, but he is equally far from reality, so that his idealistic victory is an empty one.

The Bent Stick

The classic example of the illusion on which Idealism has staked so much is that of the "bent stick." That is, when a stick, supposedly straight, is seen partly immersed in water, it appears bent, so that the defender of Idealism appears to have another argument in favor of his theory, "The world is my idea." But when one encounters the bent stick, he is not inclined to view the phenomenon with satisfaction. At best, it is only a curiosity to be placed among standardized illusions and an error to be cor-

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rected as soon as possible lest the perceiver be misled when he comes to make use of the stick in some practical way. The explanation of this false impression is of no additional aid to the idealist, since the phenomenon is a physical one which is confined to the region of the physical stimulus. As for the bent-stick argument itself, we should realize that our puerility in citing such an example is such that we have no right to scorn and laugh at the less absurd quibbles, as we call them, of the scholastic mind in the Dark Ages. Our modern bent stick is a match for their very worst scholasticisms.

Much the same can be said of errors to which Idealism has appealed with the hope of separating mind from matter. There is no error in the material world, for things are as they are; but when the mind entertains a false view of things, as in its pre-Copernican astronomy and pre-Darwinian biology, it seems to establish its independence of the things it thinks about. But, as in the case of illusion, such a victory is too costly; for why should we strive to set up the independence of the intellect when we have to defend a false notion? The rebellion of the mind against the world will ever be futile unless the mind undertakes what promises to be a successful revolution based upon truth rather than error.

In all the typical instances cited, the phil-

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osophical victory is on the side of Realism, which has succeeded in driving Idealism out of a false and foolish position. Realism has succeeded in showing that common consciousness cannot be made the model for the universe, that sensations have their objective status, and that illusions and errors are capable of being explained on a physical basis. A critical or radical Idealism, which seeks a firm basis for its interpretation of reality, sets aside all the usual arguments of sensational Idealism by asserting that, even if they could be demonstrated, they would not afford a proof of that kind of mentality on which Idealism should insist. For a mind whose content was that of superficial consciousness, sensations, illusions and errors would be of no satisfaction to itself, of no value as an interpreter of reality. Such Idealism should be grateful to Realism for having delivered it from its friends.

Quixotic Idealism

The efforts of modern Idealism, ever since the days of Descartes and Locke, have been purely Quixotic. They have been expended in the direction of the object of knowledge as tho it were necessary for thought to defend things. The arguments of Idealism have endeavored to show that thought can affect, if not create, the things of the world when experience shows that these are able to take care of themselves. When

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Idealism comes to the realization that its first duty is toward itself, it will cease trying to create the world out of consciousness and try to affirm its own conscious existence. It will do more than that, for it will reverse the effort of the Realist, who has labored to prove the "independence" of the object, and attempt to prove the independence of the subject. There cannot be and never has been any doubt about the existence of things whose stolid, inflexible exteriority has left no room for skepticism. Common experience, to say nothing of analytical science, has so thoroughly impressed the mind with the existence of things that it is only sophistry which allows one to keep on saying, "The world is my idea." It is only an extreme form of philosophy which permits one to give a definition of things in terms of consciousness. We may come to some conclusion concerning the rationality of things after we have duly examined them, and may draw conclusions of an idealistic sort after our analysis has been made. But we cannot proceed immediately from our private impression of things to the conclusion that they are mental like ourselves.

In its defense of the idealistic principle, Idealism must meet the opposition of Realism with much more vigor and system than was the case when Idealism did little more than assert, "The world is my impression of it." Realism was easily

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able to destroy Impressionistic Idealism and may be just as formidable with an Idealism of any description, so that the Idealist is placed upon the defensive. In estimating the amount of damage which Realism has done to Idealism, we shall have to go back to the fundamentals of psychology and then distinguish between mind and Mind. If by mind we mean consciousness in the common and inferior sense of that term, we must admit that Realism has pointed out the relative unimportance of such mental functions as sensation, immediate experience, sentience and everything else peculiar to the private stream of consciousness. These inner experiences may charm and nourish the private life of the individual, but they have nothing to do with his conception of the world in any philosophical sense of that term. If we desire, we may say with Amiel, "The landscape is a state of the soul," or we may go on and report after a Symbolist like Melchior de Vogüé, "The world does not exist for me." But when we come out of our Symbolism and seek reality we must use sterner mental stuff by way of interpretation. Then it may still appear that reality, which disdains our minds in their ordinary aspects, will reveal some affiliation with Mind in its major sense.

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When Half-Gods Go

If we are to exalt subjectivity, it must be upon the basis of that which has adequate content and proper form. These are not found in a consciousness made up of sensations, impressions, and emotions. What is needed in idealistic philosophy is an effort which can assert the characteristic content of consciousness instead of an easy repose in the immediate subjectivity of impressionism. The factor of effort must be stressed, since the conscious ideas of the intellect have come into being in the same way that the works of the will have been achieved. This change of front from the introspective to the energistic will reveal itself in a change of language, if in no other way. It will speak the language of will as well as that of intellect, will talk about striving after consciousness instead of merely having it, and will employ a cultural rather than a natural way of arriving at conscious ideas. There is nothing mysterious about a consciousness arrived at after effort and elaborated by means of culture, for that is the very thing mankind has had, enjoyed and used ever since man really became man. He has made his ideas just as thoroughly as he made his tools, and has elaborated his theoretical culture by the same means he employed while perfecting his civilization. It is this kind of active consciousness glow-

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ing in an active mind which we now possess rather than the dreamy flow of sensations which seems to constitute our inner life.

When we attempt to characterize this achieved and elaborated consciousness which makes up the content of Mind, we can do no better than refer to it as a system of Values. It contrasts strikingly with the inferior scheme of mental Facts, and shows how, when half-gods go, the gods come in. These values, which a Critical Idealism would install in place of impressions, are equivalent to the whole mental life of man as this life has been built up by intellectual effort, or "energy of contemplation." They cannot for a moment be discussed in their rich content, but can surely be indicated for purposes of identification. They are patterns of human culture and may stand for man as man.

The Content of Consciousness

The identification of mental values, whose range is encyclopedic, may be observed in the various Sciences. In order to appreciate these scientific values, we must yield our habit of thinking that science simply records what it finds in the natural order and realize that science formulates data and laws according to a mental plan from which the scientific value is obtained. The great change which has come over the physical sciences in this generation should

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apprise of the fact that science is not engaged in copying nature but in formulating a system for the interpretation of the world. In connection with the arts, the same principle of evaluating experience holds true, only with esthetics there is more of the subjective and less of the objective emphasis than in the case of science. Art is something which is created by man for the sake of gratifying the esthetic impulse, whatever it may be—imitation, play, expression. The objective quality of beauty is realized when it is observed that art proceeds outward from some inner tendency to the glorification of matter. That which accrues to consciousness is not so much sensation but esthetic value; not so much perception but a due amount of appreciation. When consciousness is built up in such cultural ways as are afforded by the sciences and arts, it is emancipated from idealistic impressionism and placed upon a more certain foundation.

In addition to these more intellectualistic forms of consciousness, Idealism may observe how the ethical and religious functions have built up a consciousness which means more to man than the natural flux of sensations. It is undeniable that ethical ideals, like goodness and happiness, do not fare forth from the will and take their place in the world alongside the products of science and art; for moral sentiments, even when objectified in institutions like

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State and Church, are bound to belong to the order of What-Ought-to-Be rather than to the realm of What-Is. Nevertheless, these ethical forms have the effect of enhancing the content of consciousness so that it is seen to be something more than a field of psychological data. The same may be said of Religion, which, however, reveals a tendency to objectify its consciousness in the form of beliefs in metaphysical objects like God and the soul. But on the psychological side, religion provides for a systematic conception of consciousness, which is easily distinguished from the panorama of impressions out of which the Naïve Idealist expected to build up the existential order. In the psychological laboratory, one may enjoy consciousness in the form of isolated sensations; but in actual life, the very life we live is made up of values or forms of human appreciation which are clearly recognized in moral ideals and religious aspirations.

The same is true of the individual and social life of mankind. We may credit nature with contributing a certain kind of individuality peculiar to organisms, just as we may ascribe to natural forces the formulation of some sort of social existence such as is enjoyed by insects. But when we speak of the human individual and civilized society, we are dealing with elements which man himself has elaborated for his own purposes.

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The result is that we are now in possession of a kind of life quite different from that of a bee in the hive or an ant in the hill. Our human life as such is something which we have wrought out after much effort, and which, as yet, exists in an imperfect form only. But the effort toward individual and social life has proceeded to such a point that we may think of ourselves as being conscious in a way that man was not before he developed his civilization.

These various forms of consciousness, scientific and esthetical, moral and religious, individual and social, are sufficient to show that man has made, or is making, the kind of consciousness which has content and which is a far more adequate measure of the world than the raw consciousness of sensations to which the Idealist has kept appealing. It is true that we cannot take this elaborated consciousness and project it upon the world with the idea that it will equal reality, but we can proceed from it as from an adequate basis in our interpretation of the world. At any rate, we can bring ourselves to the realization that the subject of knowledge is not to be taken for granted but must be wrought out by all manner of effort. It has been thus wrought out by man himself in his endeavor to live a human life as such, so that all Idealism has to do is to avail itself of the effort which man has put forth

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in his own behalf and use that kind of man as something like the measure of all things.

Does Knowledge Merely Happen?

Just as there is more to the subject of knowledge than Idealism has seen fit to observe, so there is a far richer content in the object than Realism has considered. What we have in philosophy and science, as what we have in common experience, is a universe replete with a manifold of things rather than a mere "object" of knowledge. Hence a genuine realism might better analyze its subject-matter instead of contenting itself with a kind of anti-Idealism which keeps insisting that the object is independent of the subject. The object can be thrown into the epistemological position for a time for the sake of our learning something about the knowing-process; but if one desires to be realistic, one would better forego the desire to disconcert the Idealist and develop the concepts of reality, like substance, causality, matter, mind, just as science ignores the idealistic interpretation of things and proceeds to discover the laws which control them.

Now, it is the contention of the Realist that knowledge is fairly unimportant to the object, so that "knowing the object," instead of making or even affecting it, is something which merely happens to it. It is as tho the object had been

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rained on, since the rain would affect the object with its wetness. Or, better, it is as tho a light which shone without heat had so brightened the object as to render it visible. But, as a matter of fact, nothing happens to the object when it becomes the subject of knowledge, for the knowing process which cannot make or affect things has no more power to cause anything to happen to them. When the act of knowledge takes place, as when a new planet is discovered, a new element found or a new principle of motion elaborated, the only thing that happens is something which takes place in the subject of knowledge, the mind of man. When things happen in the universe, we have a physical phenomenon, like an eclipse; when things happen in the mind, we have a psychological phenomenon, like a new theory of gravitation or evolution. Among all the events which transpire in the world at large, where things move, change, divide, unite and the like, there is nothing of a psychological nature unless the mind of man in particular is affected, so that to speak of knowledge as that which merely happens to an object is to express inaccurately the opinion that the knowing process doesn't count in the real world.

If one is indulging the idea that to be is merely to be perceived by man, the realistic notion of knowledge as a simple happening is of some polemical value. When, however, we

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place Idealism upon the basis of thought, which deals with ideas that belong together, it may be that the knowing process, instead of being an idealistic tempest in a teacup, will have some bearing upon the real world. If the Idealist persists in trying to make the world look like man and thinks of cosmic transactions in the form of consciousness, he will always encounter that obvious opposition which Realism has voiced. But if, on the contrary, philosophy attempts to make man look like the world by construing his mental processes after the manner of physical laws, it may be that man will assume the form of a microcosm whose knowledge of things at once becomes important.

Picture or Machine?

When we emerge from the pleasant cloud of purely psychological sentience, experience, consciousness and the like into the dry light of logical reason, we shall not be so ready to look upon knowledge as something "accidental," since knowledge of the superior, logical sort appears to be highly essential. The Realist endeavors to set knowledge generally aside by means of fallacies which have been manufactured for that purpose. Prominent among these new fallacies are those of "Exclusive Particularity" and "Definition by Initial Predication." They mean that, to discuss them in reverse order, the

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Idealist begins by regarding his object in relation to himself as the perceiving subject and ends by asserting that such a psychological point of view is the only one to be taken. Now, Berkeley did that, and all the Impressionistic Idealists who have followed him have done the same, so that this sort of fallacy is applicable to this sort of Idealism. We know, as far as we may pretend to have knowledge, that such an idealism is not true, since what we have learned about the world in modern times has not been such as to make it a mere panorama for the perceiving mind. The world may look like a moving picture thrown on the screen for our human eyes to delight in, but the effect which we experience and enjoy fails to take into account the machinery by means of which the cosmic picture is produced and projected. It is that very machinery, however, which should interest us more than the picture if we are inclined to take a philosophical view of things.

The Realist professes to be greatly interested in the object of knowledge and has followed the Idealist in putting all reality upon the basis of our way of knowing it rather than upon what it shows itself to be. The philosophical mind would express this by saying that Realist and Idealist alike, instead of trying to analyze reality, have considered the ground of knowing instead of the ground of being, *ratio cognoscendi* instead of

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ratio essendi. Apparently the Realist has been concerned with little else than the dialectical location of the object, which, he insists, is not in here among the psychological data but out there among the physical ones. It is still the "object" and is still thought of as the subject-matter of knowledge. It is not reality which may be thought of for its own sake and after its own manner, hence the "Objectivism" in which the Realist would indulge is just as formal in character as the Subjectivism which he would set aside.

Reality does appear in time and space, where it becomes the object of knowledge for the perceiving, thinking subject; but it does not exist and operate for the sake of being on philosophical parade. If we will accept the appearance of things as something significant and cease trying to locate phenomena, whether in the subject or the object, and if we will deny ourselves the delights of debating the advantages and disadvantages of various theories of knowledge—Idealism and Realism, Mysticism and Pragmatism—we may be able to find out what the real world is like. The last generation of philosophic thinkers has been busy trying to find the correct method of knowing things rather than the real nature of the existent world. In the form of epistemology, or theory of knowledge, they have indulged in a kind of philosophical egoism which has concerned

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itself with man's attitude toward his problem rather than with the nature of the problem itself. Meanwhile, extraordinary conceptions of matter and mind have been developed by those who never bothered about how much knowledge belonged to the subject, how much to the object. We recognize these physical and psychological notions in Relativity and Behaviorism and regret that philosophy has spent so much of its time discussing the problem of subject-object that it has not been able to devote itself more fully to the philosophical bearing of physical and psychological conceptions.

The Method Unimportant

The way we come to know things affords an interesting problem for speculation, but it cannot compare in importance with that of the nature of things when we come to know them. It is what we know, not how we came to learn about it, which counts. This means that genuine philosophy concerns itself with some sort of metaphysics instead of epistemology, which is such a favorite study to-day. One may develop a theory of knowledge by the use of psychology and logic, but he has no right to project his *special method upon the world and regard reality as the shadow cast by the mind*. The particular theory of knowledge may be that of Pragmatism, but from this it does not follow that

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reality is pragmatic. Or, one may find reality by pursuing a mystical pathway toward it, but this does not prove that reality is "mystical." These epistemological methods are so many rules of thumb which are discarded the moment the real result is achieved.

In the case of Rationalistic Idealism and Empirical Realism, the same difference between the way of knowing and the form of being still holds, altho in no such obvious manner. Idealism uses ideas as its method of finding reality, and then proceeds to regard reality as a world of ideas. Now, the real world may be something like that, but our reason for believing that it is a world of ideas is not based upon the way we come to know it, but on the way it shows itself to exist and behave. As to Realism, it may be said that undoubtedly the world is real, but we believe that because of what it shows itself to be, not because of any objectivistic arguments which the Realist puts forth. Realism is just as formal as Idealism; it does not conduct us to reality in the sense of that which appears in time and space, carries on cosmic operations according to change and causality, and persists in appearing and operating as tho there were some sort of substance in it. Realism presents us with an object of knowledge whose content is made up of materials which it has forced Idealism to restore to the world. If we are to find reality,

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we must put our theories of knowledge in their proper place, which is that of methodology, and then by an analysis of what we find in our experience come to some conclusion about the nature of things generally.

What Is Reality Like?

The vastness and variety of the universe are such that one may hesitate even to suggest what reality is like, but the intellectual enterprise of the human mind has been carried out to such an extent as to warrant some sort of philosophical generalization. Now, the findings of the human spirit in the conceptions of philosophy and science, in the expressions of art and religion, as in the aspirations of morality and social existence, are such as to justify the idea that all reality is based upon Order. We might express this after the manner of science by using the term, "Law," or take it in the specific sense of "Causality"; but as long as we think of the real in terms of orderliness of relation and operation we shall not go far astray. The full realization that such order or law or relation is the very genius of reality will relieve our minds, which are likely to be disturbed by the conflict over the subjectivity and objectivity of things.

We are impelled to place an order of some sort at the heart of things by the very exigencies of action. We can well imagine that the primitive

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mind, often confused by the subjectivity of dream and fancy within and brutal facts without, came to the realization that there was a certain regularity about the world which made things shape themselves in a definite manner and urged them to conduct themselves according to some sort of plan. The primitive mind learned what was meant by "the way things are" and "how things go," for things exist and operate by virtue of an orderly principle without which they could not exist. The same impression of order arose and still obtains in the field of perception. We glean flying impressions of things and in the freedom of consciousness outline their possible forms and modes of action. But when we come to perceive objects, we are brought to the realization that it is only by following a set plan that we are able to lay hold of them in their abject reality. One may think of a tree and draw a picture of it, beginning with the branches and ending with the roots; but when he perceives the tree as a growing thing he must follow the set order of root, trunk, branch. Or one may let his fancy form the image of a house in the order of roof, wall and foundation; but the actual perception of that object calls upon him to reverse the free order of the mind and perceive the building as something set up in obedience to the law of gravitation. Both action and perception

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call upon the mind to recognize something which is neither subjective nor objective, but real.

When, instead of having before us an undefined "Object," we have reality in the form of Order, we are in a better position to consider the question of epistemology, or our way of knowing the world. We might resume the Idealist-Realist controversy and continue to debate in terms of the subject or the object, but it seems wiser to cast about for a principle which both subject and object have in common. This is found in Space, or spatiality, which is the space of geometry. We might attempt to think of things generally as though they enjoyed a kind of mysterious being, no inkling of which can come to the mind of man, just as we might try to think of the mind as tho it employed some sort of esoteric interpretation of the world, as in a way is done by the mystic; but we may lay hold of the world and initiate our interpretation of it by means of geometrical insight, from which, perhaps, deeper and more satisfactory views may be developed.

The Geometrical Form of Things

The intellectual achievements of the human mind, as these are now recorded in the history of science, have been brought about by reason of the fact that space is in some sense subjective, ideal, mental. The discovery of this traces back

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to Kant, a century and a half ago, but the general consciousness of it arose with the very beginnings of knowledge. How was the mind to get in touch with the world and how work out mentally a plan which later could be carried out in material ways, as in the manufacture of objects? The answer to this question is—by means of space. Kant, as we have seen, decided that space was a form of perception so fundamental that before any particular object could be located as here or there, the mind must be in possession of the spatiality which anticipates the coming of the object. He argued, further, that after every object in space has been removed from the mind, the general sense of spatiality remains, so that it is as tho the walls of the intellect were spatial ones. But Kant was doubtless too ambitious in his treatment of what he had discovered, for he proceeded to the conclusion that space is nothing but a subjective way of representing the world whose real nature is unknown to us. The spaced world, aye, the whole scientific cosmos which we come to know, is not a land which we discover but only a map which we draw. Space is the form which things assume when we look at them, but when we look for them we discover only the picture of them which we have patterned for ourselves. What a price this victory over the world has cost us! It does not allow us to peer into the depths of

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things, but forces us to be content, Narcissus-like, with the reflection of our own image on the surface.

But when we bear in mind that reality, as far as our science and philosophy, our art and religion have been able to make it out, is Order, we are in a better frame of mind to consider our space. This spatiality, which has made all our thinking follow a kind of geometrical method, is the way in which we mortals intuit, interpret and lay hold of things generally. What we reason out as order we represent in the form of space; we do not copy the objective spatiality of things in the form of subjective spatiality, as tho we saw the world in miniature. No, we take the world as a system of orderly relations and treat these after the manner of geometry. We get the real world, but lay hold of it in our own manner, which is the spatial one. If, instead of being mortals, we were Greek gods, we might intuit the order of the world in some other manner, as that of pure relations; but since our finitude is such as to limit us to a spatial way of apprehending the real, we should rejoice in the geometrical insight which we are able to exercise.

As to the Order which our knowledge represents to us spacewise, we can conclude that, unless all human knowledge has been chimerical, it is a true view of things. It is this Order, discovered originally in simple perception and

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direct action, which the ancients developed in the form of Ideas, or concepts, and the same Order which moderns have elaborated in the form of Laws, or relations. Doubtless there is much difference between the ancient notion of intelligible things and the modern idea of rational relations, but both their philosophy and our science have insisted on the general principle of Order as the animating spirit of reality.

Reality a Rational Order

The principle of Order, which we come to feel as the very sense of reality and on which we act as in accordance with the real rule of things, is none other than Reason. For, if things are to exist and interact in such a way as to constitute a universe, their existence and action must be supervised and directed by a logical *modus operandi*. We say, "must be" so supervised and directed when we are in no position to dictate the terms by which things are and do act. But we are so placed philosophically that we can affirm Reason to be the principle which constitutes the essence of things and guides their activities. We are put in that position by what we know, especially from what we have learned from science in its extended and consistent analysis of the nature of reality. From science, which is only an extremely careful examination of things, we learn the geometrical pattern of real-

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ity and the logical form of behavior which things forever manifest. Things may exist by virtue of some principle of which we have never dreamed and may act in accordance with a rule so secret that we have no idea of it. But the appearance of reality, as we gather this from experience, is such as to justify us in assuming the presence of rational order as that without which things could not be or act.

The things of the world do indeed appear to be different from the thoughts of the mind, so that we cannot assume that they are working out geometrical propositions and drawing logical conclusions any better than we can assume that we are thinking things. Reality itself is bound to remain such a mystery that we cannot answer, or even justly ask, the question, "Why are there things?" or "How did things come to exist?" We cannot for a moment hope to deduce the idea of reality from any category of being which we have; we cannot think of the real as something "given" in the way that a particular object is presented to perception. In fact, we cannot think any aboriginal thought about the existence of things, altho we can rest assured that that which shows itself in time and space, makes fruitful appeal to our perceptions, responds to our activities and carries on its cosmic operations is not any mysterious "Thing-in-itself" or a mere idea in the mind as a sort of

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"Idea-in-itself," but the real world whose reality is known to us. Nor need we indulge in a Platonism and thus assert that the ideal is real, however suggestive and heartening such a form of speculation may be; but we can assume, if not assert, that the real is the rational and that it has to be rational in order to be real.

The difference between the things of the world and the thoughts of the mind is not to be overcome merely by speaking of reality as something rational and then claiming that we are in possession of the same principle of rationality. But, altho the difference between thought and thing, object and subject, will ever remain, it does not follow that we are destined to remain in ignorance of things. Things do not express themselves in an unknown tongue, but in a foreign language which, however, we are able to translate. It is not that the language of thought, so to call it, possesses exact cognates of the language of things, or that our human translation of the real language is exact; it is as tho our thought, in its philosophy, science and general culture, was able to give a good rendering of reality, so good as to assure us that we can gather the meaning of the real.

The Unity of Things

The meaning of the real, as we are calling it, is expressed in the vast and multifarious body of

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knowledge which now makes up our science. Philosophy, however, desires more than data, relations and extensive theoretical conceptions, like the conservation of energy or the unity of gravitation and magnetism. What philosophy wants and has aimed at from the very beginning is a singular and sufficient principle of real thought which will express the Unity of Things. When this desire to find Unity is looked upon lightly, it will appear to be a vain attempt to get to the top of things and from this as a vantage-point exercise omniscience. But when the quest for Unity is regarded more soberly, it will appear to be neither more nor less than a normal desire on the part of the speculative mind, which desires to obtain corroboration of those evidences of Unity which it has been finding from the beginning of knowledge. Science, which has never shunned the burden of discovering the truth about particular things, has been almost as conscientious in attempting to account for them generally upon the basis of "Matter" or "Energy." All things exist, it says, by participating in this matter; all operations go on by virtue of the universal energy. Now, we need not credit these special attempts at unification, but we can approve of the motive which has led scientific speculation to indulge in such generalities or to make use of them as hypotheses. We can assume the normalcy of

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science in its attempt at unification and, further, can observe with care that the procedure of science has been such as to round out the circle of reality, whose special arcs have been traced here and there in approximating to what is now called the "Uniform Field of Relativity."

The only question which philosophy can raise in the presence of the scientific Unity of Things is that of its character and completeness. In dealing with the idea of Scientific Unity, philosophy must begin by expressing gratitude to science for investing the abstract idea of Unity with definite content, but must further confess regret that science has been unable or unwilling to yield more than a coarse Unity of Things. There is apparently a physical Unity by means of which things exist and act, but it is not so apparent that this is the Unity which we may set up as unified reality in its fulness and richness. What we desire to include and have participate in the benefits of Unity is the mental, since the thoughts of the mind as well as the things of the world are worthy of a place in the total system, especially as it has been by these thoughts of the mind that the theory of Unity has been worked out.

Philosophy cannot assume to give a "proof" of the Unity of Reality, but it can continue to speculate about it until it finds a principle which seems appropriate in form and adequate in char-

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acter. Proceeding in this manner, it is now in a position to affirm that the desired unity is not so much the coarse, materialistic one suggested by the physics of the nineteenth century, but the finer and more spiritual one indicated by the nature of the physical world as the latter is understood to-day. The tentative results of physical science in its attempt to get at the nature of the universe are to be appreciated chiefly by those who are adepts in these things. The lay mind, however, may participate in these speculations to the extent of something negative at least. It can observe with satisfaction that the material world is not as forbidding in its impenetrability as it seemed a generation ago, since apparently it is not built up of indivisible units of matter but is finer and lighter in its construction. It can be likened to a "world of waves" rather than to a field of solids, and may be thought of as non-infinite in its geometrical extent. It can be considered with somewhat the same freedom and comfort that are felt when philosophy conducts its speculations, as tho the concretely physical and abstractly metaphysical were not far apart.

What both science and philosophy, matter and mind have in common is the principle of Reason. It is by means of rationality that things enjoy their existence and carry on their operations, just as it is by means of Reason, in the form of

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consciousness, that the nature and activity of those are known. When we view the world in its astronomic form, it might seem as tho things existed by their very size. When we consider the way in which its energy expresses itself, it might appear as tho strength were the essence of reality. But we come to realize that the extent of things is something of a geometrical character and that the force of things expresses itself along the lines which geometry lays down. So that it is not by size, it is not by power that things exist, but by the spirit of rationality which invests them and informs the mind about them. If we consider the things of the world here and the thoughts of the mind there, we seem to have two lines of procedure before us; but when we observe further that things exist in a rational order just as thoughts when they are true follow the same principle of rationality, we realize that there is the very closest analogy between being and thinking. Both must heed the voice of reason, which is put forth in matter and mind alike.

The Real Absolute

Philosophy saw this at the beginning when Parmenides intuited the unity of thinking and being, and immediately identified them. Philosophy has always looked upon the real as some sort of expression of the rational, altho often it

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has upheld this notion as a pure ideal. Its feeling that the real was the rational was expressed significantly in the term, "noumenal," or mind-like, which it used to indicate its sense of fundamental reality. It has not thought of this real-noumenal as something immediate in perception or obvious in character, but has regarded it as something difficult to discover. With Plato, the discovery of the noumenal-real was to be made only after effort and perseverance; with Kant, it was looked upon as impossible, except as the mind, having come to the end of its course in the world of appearance, abandoned speculative reason and availed itself of the powers inherent in the moral will. Others who have speculated in less commanding ways have pursued this noumenal reality with the same effort expressed in other forms, as in poetry and religion. And since philosophy from the beginning has been a quest for the real-rational, there is no reason why we should try to look at it in any other way.

When, finally, we attempt to state the nature of ultimate reality, we are persuaded to do so in terms of rationality generally. But instead of leaving philosophy with a general principle spread out broadly but without much depth, we find it expedient to connect rationality with mind and mind with the Absolute. If we persist in the manner of Subjective Idealism, which attempts to make the grounds of both knowing

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and being something peculiar to the human mind, we shall end where we began—in pure phenomenalism, or a world of seeming. But if we take our human way of apprehending reality to be no more than a hint of its essential nature, we shall be in a position to regard the whole spectacle of things as something which exists and expresses itself by means of none other than Absolute Mind, or God. The sense of this notion may be expressed by saying, not “The world is my idea,” but “The world is God’s idea.”

But the real meaning of that which is put so directly cannot be enjoyed if we take the astronomic universe to be a picture in the mind of God, for that would only give us our human world on a large scale. Nor can we follow Pascal when he said, “God geometrizes,” as tho the Deity merely anticipated Euclid or Riemann in laying hold of the spatial aspect of the real. It is doubtful, further, whether we can regard the Absolute as sustaining to the universe a relationship comparable to that of Plato or Spinoza, who viewed things in the form of unified being. But, even when we cannot indicate the special manner in which the Absolute lays hold of reality, whether as a picture or a mathematical proposition or a philosophical system, we can still maintain the notion that in and behind the cosmic system is that Absolute Mind without which it could not exist, still less be known.

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